Aspire AX1400
Desktop Computer Service Guide

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Revision History

Refer to the table below for changes made on this version of the Aspire AX1400 Desktop Computer Service Guide.

Date	Chapter	Updates

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Conventions

The following conventions are used in this service guide.

SCREEN MESSAGES	Denotes actual messages that appear on screen.
NOTE	Gives additional information related to the current topic.
WARNING	Alerts you to any physical risk or system damage that might result from doing or not doing specific actions.
CAUTION	Gives precautionary measures to avoid possible hardware or software problems.
IMPORTANT	Reminds you to do specific actions relevant to the accomplishment of procedures.

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Service Guide Coverage

This Service Guide provides you with all technical information relating to the BASIC CONFIGURATION decided for our "global" product offering. To better fit local market requirements and enhance product competitiveness, your regional office MAY have decided to extend the functionality of a machine (e.g. add-on card, modem, or extra memory capability). These LOCALIZED FEATURES will NOT be covered in this generic service guide. In such cases, please contact your regional offices or the responsible personnel/channel to provide you with further technical details.

FRU Information

Please note WHEN ORDERING FRU PARTS, that you should check the most up-to-date information available on your regional web or channel. If, for whatever reason, a part number change is made, it will not be noted in the printed service guide. For AUTHORIZED SERVICE PROVIDERS, your office may have a DIFFERENT part number code to those given in the FRU list of this printed service guide. You MUST use the list provided by your regional Acer office to order FRU parts for repair and service of customer machines.

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Chapter 1

Features and Specifications

This chapter lists the features and specifications of the Aspire AX1400 computer.

NOTE The items listed in this section are for reference only. The exact configuration of your PC depends on the model purchased. Refer to the FRU list chapter on page 69 for a detailed list of models supported by each hardware component.

System Features

Component	Description
Operating system support	• Microsoft Windows 7 Home Basic (X64/X86) • Microsoft Windows 7 Home Premium (X64/X86) • Microsoft Windows Starter X86 • Microsoft Windows XP Home X86 • Ubuntu X-windows version • FreeDos
Processor	• Sockets AM2+/AM3, 941 pin contacts • Supports the following AMD processors: – Phenom II 705e and 700e – Athlon II x3 405e and 400e – Athlon II x2 255, 250, 245, 240 – Athlon II x2 215, 240e and 235e – Athlon II x2 B24 and B22 – Athlon II x2 260u, 250u, 160u and 150u – Sempron 140
Chipset	• NVIDIA® nForce® 430 MCP (MCP61), or • NVIDIA® nForce® 730a/720a MCP (MCP78)
Graphics controller	Integrated in the NVIDIA® nForce® Chipset
Memory	• Two DIMM slots supporting 240-pin unbuffered DDR3 SDRAM modules • Data rate supported: 800/1066/1333 MT/s • Maximum memory: 4 GB (using two 2 GB modules)
Expansion options	• One PCI Express x16 slot (reserved for GPU card installation) • One PCI Express x1 slot
Connectivity	• Wired LAN: Realtek RTL8201EL (Single-Chip/Port 10/100 Fast Ethernet PHYceiver with Auto MDIX) • WLAN option: 802.11 b/g/n wireless network adapter
Hard disk drive (HDD)	• One HDD bay suppporting 3.5-inch 25.4 mm SATA HDDs • Support 7200 rpm SATA HDD in 320 - 1000 GB capacities
Optical disc drive (ODD)	• One ODD bay supporting 5.25-inch standard SATA ODD • Supports DVD-R/RW drive or DVD-Super Multi double-layer drive

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Component	Description
Card reader (optional)	• 9-in-1 card reader (optional) • The following memory cards are supported: – Memory Stick (MS), Memory Stick Micro (M2) – xD-Picture Card (xD) – Secure Digital (SD), MultiMediaCard (MMC) – CompactFlash, Type I/II (CF, Type I and II) – Memory Stick PRO (MS PRO)
TV tuner (optional)	AVerMedia H751 PCI-E Hybrid Analog/ATSC Card
Power supply	220 W power supply unit (non-PFC, non-power factor correction) 220 W power supply unit (PFC)
Antivirus software	Norton Internet Security
System BIOS	• AMI BIOS with 8 MB SPI ROM • Supports ACPI revision 2.0 standard • Supports Plug and Play, STR(S3)/STD(S4), hardware monitor, Multi Boot, and DMI protocols
Power management	• ACPI 2.0 or 1.0b (Advanced Configuration Power Interface) standard • S0, S1, S2 and S5 sleep states support • On-board device power management support • On-board device configuration support

Audio

Item	Description
Audio codec	• Realtek ALC888S 7.1+2 Channel High Definition Audio Codec, or • Realtek ALC662 5.1 Channel High Definition Audio Codec
Audio jacks	• Front panel: Headphone and microphone jacks • Rear panel: Microphone, line-out, and line-in jacks

I/O Ports and LED Indicators

Component	Description
I/O ports	• Front panel – USB ports (five) – Headphone jack – Microphone jack – CF card slot – Memory Stick PRO card slot • Rear panel – PS/2 keyboard and mouse ports – External display (VGA) port – USB ports (four) – Ethernet jack (RJ45) – Microphone, line-out, and line-in jacks
LED indicators	• Hard drive activity • Power status

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Physical Specifications

Aspect	Description
Chassis dimension (W × D × H)	100 mm (W) X 367 8 mm (D) x 269 mm (H)
System weight	5 808 kg
Mainboard form factor	microATX (µATX)
Mainboard dimensions (W × H)	244 × 220 mm

Environmental Requirements

Aspect	Description
Operating temperature	5 to 35 °C (41 to 95 °F)
Operating humidity	15% to 80% RH non-condensing

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System Tour

The pictures and tables in this section illustrate the physical outlook of the computer

Front View

No.	Component
1	Power button/indicator
2	Optical drive cover
3	Optical drive button
4	XD (XD-Picture) and SD/MMC (Secure Digital/MultiMedia Card) slots
5	CF card slot (Type I and II)
6	USB 2.0 ports
7	Headphone jack
8	Microphone-in jack
9	USB 2.0 ports
10	USB 2.0 port
11	Acer logo

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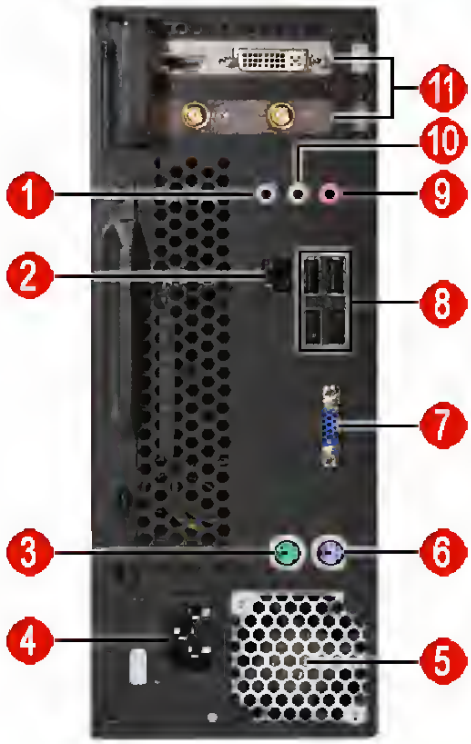
Rear View



No.	Component
1	Line-in jack
2	LAN connector
3	PS/2 mouse port
4	Power connector
5	Fan aperture
6	PS/2 keyboard port
7	Monitor port
8	USB 2.0 ports
9	Microphone jack
10	Line-out jack
11	Expansion slots

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Chapter 2

System Utilities

CMOS Setup Utility

CMOS Setup Utility is a hardware configuration program built into the system ROM. Since most systems are already properly configured and optimized, there is normally no need to run this utility.

You will need to run this utility under the following conditions:

- When changing the system configuration including:
  - Setting the system time and date
  - Configuring the system drives and peripherals
  - Specifying the boot device sequence
  - Configuring the power management modes
  - Setting up system passwords or making other changes to the security setup
- When trying to resolve IRQ conflicts
- When a configuration error is detected by the system and you are prompted ("**Run Setup**" message) to make changes to the BIOS settings

The Setup Utility loads the configuration values in a battery-backed nonvolatile memory called CMOS RAM. This memory area is not part of the system RAM, which allows configuration data to be retained when power is turned off. The values take effect when the system is booted. POST uses these values to configure the hardware. If the values and the actual hardware do not agree, POST generates an error message. You must run this utility to change the hardware settings from the default or current configuration.

IMPORTANT If you repeatedly receive "**Run Setup**" messages, the RTC battery located on the mainboard (BT1) may be defective. In this case, the system cannot retain configuration values in CMOS. Replace the RTC battery with a new one.

NOTE For ease of reading, CMOS Setup Utility will be simply referred to as "Setup" or "Setup Utility" in this Service Guide.

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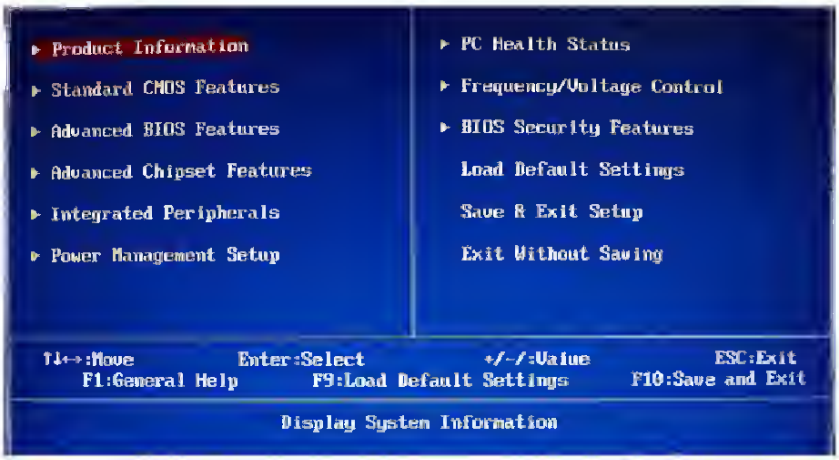
Accessing the Setup Utility

1. Turn on the computer

   If the computer is already turned on, save your data and close all open applications, then restart the computer.

2. During POST, press **Delete**

   If you fail to press **Delete** before POST is completed, you will need to restart the computer.



Use the **Up/Down/Left/Right** arrow keys to move between the menu options, then press **Enter** to execute that option.

Some options lead to pop-up dialog boxes that prompt you to verify that you wish to execute that option. Other options lead to dialog boxes that prompt you for information.

Some options (marked with a ▶) lead to submenus that enable you to change the values for the option. Use the **Up/Down/Left/Right** arrow keys to scroll through the items in the submenu.

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Navigating through the Setup Utility

Use the keys listed in the legend bar on the bottom of the Setup screen to work your way through the various menu and submenu screens of the Setup Utility. The table below lists these legend keys and their respective functions.

Key	Function
Up/Down/Left/ Right arrow keys	Move the cursor to the menu/field you want The currently selected field will be highlighted.
Enter	• To open the page for the currently selected menu/submenu • To apply a field value.
PgUp and PgDn	Move the cursor to the previous and next page of a multipage menu.
Home	Move the cursor to the first page of a multipage menu.
End	Move the cursor to the last page of a multipage menu.
+ and -	To select a value for the currently selected field (only if it is user-configurable). Press these keys repeatedly to display all possible entries. A parameter that is enclosed in square brackets [ ] is user-configurable. Grayed-out parameters are not user-configurable for one of the following reasons: • The field value is auto-configured or auto-detected. • The field value is informational only. • The field is password-protected.
Esc	If you press this key: • On one of the primary menu screens, the Exit menu displays. • On a submenu screen, the previous screen displays. • When you are making selections from a pop-up menu, closes the pop-up without making a selection.
F1	To bring up the General Help window. The General Help window describes other Setup navigation keys that are not displayed on the legend bar.
F9	Press to load default system values.
F10	Press to save changes and close the Setup Utility.

Setup Utility Menus

The Setup Utility has twelve menus for configuring the various system functions. These include:

- Product Information
- Standard CMOS Features
- Advanced BIOS Features
- Advanced Chipset Features
- Integrated Peripherals
- Power Management Setup
- PC Health Status
- Frequency/Voltage Control
- BIOS Security Features
- Load Default Settings
- Save & Exit Setup
- Exit Without Saving

NOTES
- The screenshots used in this section are for illustration only. The values displayed may not be the same as those in your computer.
- In the descriptive tables following each of the menu screen illustrations, settings in **boldface** are the default and suggested settings.

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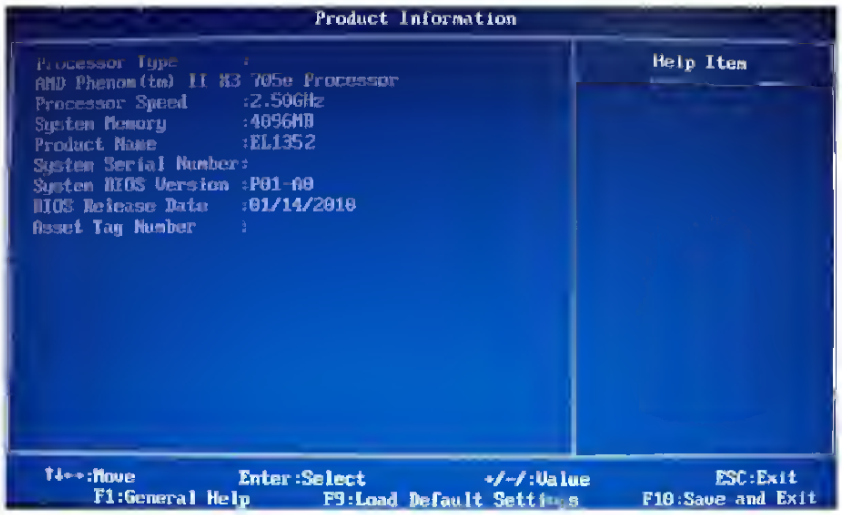
Product Information

The Product Information menu displays basic information about the system. These entries are for your reference only and are not user-configurable.



Field	Description
Processor Type	Type of processor installed on the system
Processor Speed	Speed of the processor installed on the system
System Memory	Size of system memory detected during boot-up
Product Name	Official model name of the computer
System Serial Number	System serial number
System BIOS Version	Current system BIOS version
BIOS Release Date	Date when the CMOS setup utility was released
Asset Tag Number	System asset tag number

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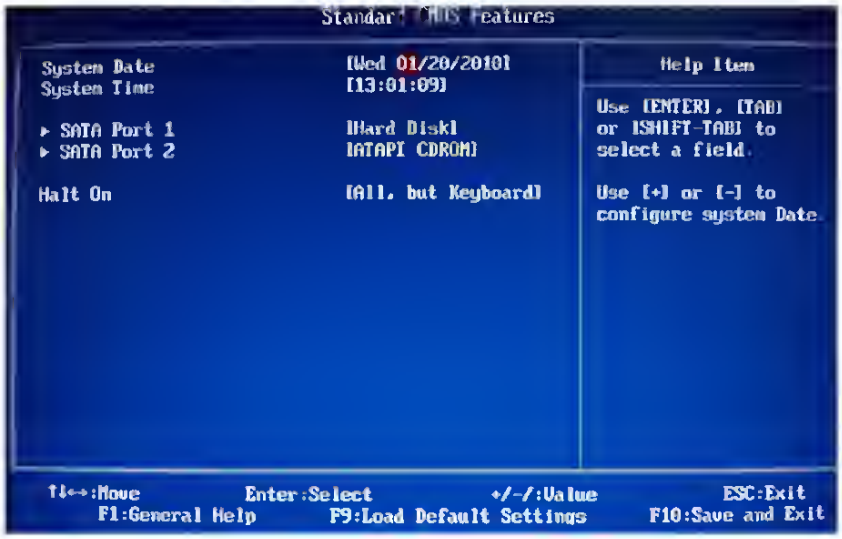
Standard CMOS Features



Field	Description	Value
System Date	Sets the system date	MM/DD/YYYY (month/day/year)
System Time	Sets the system time	HH:MM:SS (hour minute second)
SATA Port 1–2	Your Aspire computer supports two SATA channels, each channel allows one SATA device to be installed. Press **Enter** to display the individual configuration screen of installed SATA drive(s).	
Halt On	Determines whether the system will stop for an error during the POST. Options include: • All Errors - Any error detected will pause the system • No Errors - BIOS will ignore any errors detected during POST • All, but Keyboard - If a keyboard error is detected, BIOS will pause the system	All Errors No Errors **All, But Keyboard**

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Advanced BIOS Features

Advanced BIOS Features
Quick Boot [Enabled]
Quiet Boot [Enabled]
1st Boot Device [Hard Disk:3M-ST332]
2nd Boot Device [CD/DVD:4M-ATAPI DV]
3rd Boot Device [USB:Generic- Compa]
4th Boot Device [LAN]
▸ Hard Disk Drive Priority [Press Enter]
▸ Optical Disk Drive Priority [Press Enter]
▸ Removable Device Priority [Press Enter]
▸ Network Device Priority [Press Enter]
Bootup Num-Lock [On]
Boot Sector Virus Protection [Disabled]
USB Beep Message [Disabled]
Help Item
Allows BIOS to skip certain tests while booting. This will decrease the time needed to boot the system.
↑↓→←:Move
Enter:Select
+/-/:Value
ESC:Exit
F1:General Help
F9:Load Default Settings
F10:Save and Exit

Field	Description	Value
Quick Boot	When enabled, the system starts up more quickly be elimination some of the POST routines	**Enabled** Disabled
Quiet Boot	When enabled, BIOS will show a full screen logo when booting; if disabled, BIOS will show the diagnostic POST screen when booting	**Enabled** Disabled
1st/2nd/3rd/4th Boot Device	Displays the device assigned to the specified boot sequence. The Setup Utility attempts to boot the operating system in this order. By default, the computer searches for boot devices in the following order. • Hard disk • Optical drive (CD/DVD) • Removable device • Network boot (LAN)	
Hard Disk Drive Priority	Press **Enter** to specify the boot device priority sequence for the installed hard drive(s)	
Optical Disk Drive Priority	Press **Enter** to specify the boot device priority sequence for the installed optical drive.	
Removable Device Priority	Press **Enter** to specify the boot device priority sequence for removable drives.	
Network Device Priority	Press **Enter** to specify the boot device priority sequence foe available network drives	
Bootup Num-Lock	If you set this item to On, the keyboard Num Lock key will be active when the computer boots up.	**On** Off
Boot Sector Virus Protection	If set to Disabled, when anything attempts to access the boot sector or hard disk partition table, there will be no warning message.	Enabled **Disabled**
USB Beep Message	Select whether to allow the BIOS to emit error beeps or display error messages during USB device enumeration.	Enabled **Disabled**

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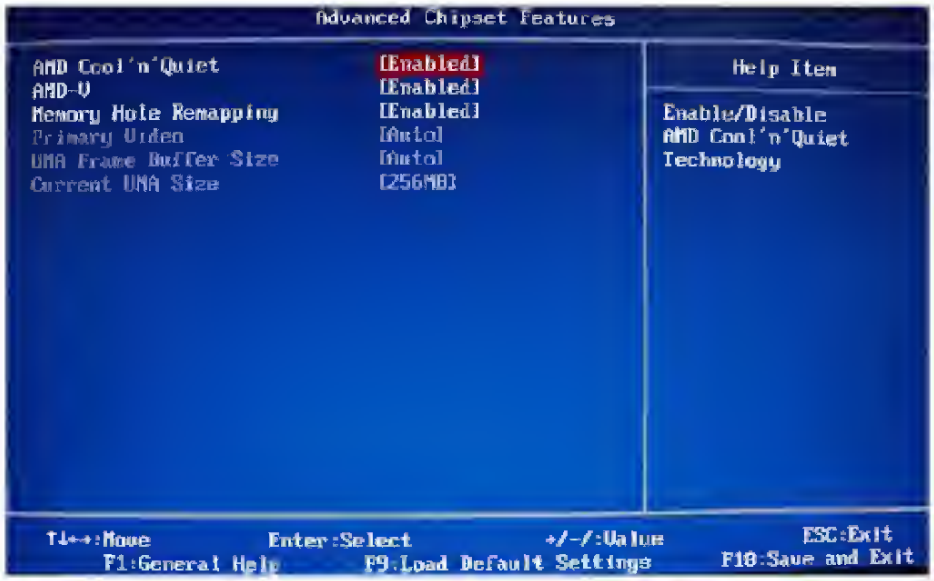
Advanced Chipset Features



Field	Description	Value
AMD Cool 'n' Quiet	Select whether to enable the AMD Cool '**N**' Quiet Technology. This technology allows a compliant OS to dynamically adjust the system voltage and core frequency for reduced heat and noise emission	**Enabled** Disabled
AMD-V	Select whether to enable the AMD-V Technology. This technology allows a single platform to run multiple operating systems in independent partitions.	**Enabled** Disabled
Memory Hole Remapping	When enabled, some or all of the memory between the 2 GB and 4 GB limits to addresses above 4 GB. This is a workaround for the PCI hole or PCI memory hole which is a limitation of 32-bit hardware and 32-bit operating systems that causes a computer to appear to have less memory available than is physically installed **Note:** This feature is useful for systems running on 64-bit OS and those 32-bit systems that support the Physical Address Extension method	**Enabled** Disabled
Primary Video	When a GPU expansion board is installed, you have the option to select which graphics controller to activate. **Note:** When this field is set to Auto, the graphics controller priority sequence is: PCIE, Onboard, then PCI.	**Auto** PCIE Onboard PCI
UMA Frame Buffer Size	When a GPU expansion board is installed, you can select how the system video memory (frame buffer) is allotted.	**Auto** 32 MB 64 MB 128 MB 256 MB

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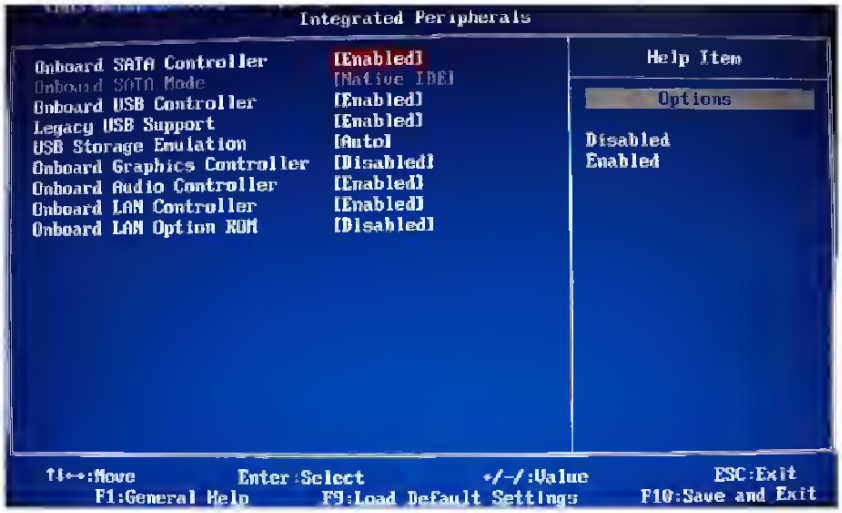
Integrated Peripherals



Field	Description	Value
Onboard SATA Controller	Enables or disables the onboard SATA controller.	**Enabled** Disabled
Onboard SATA Mode	Set the operating mode for the onboard SATA controller.	**Native IDE**
Onboard USB Controller	Enables or disables the onboard USB controller.	**Enabled** Disabled
Legacy USB Support	Enables or disables support for a USB mouse and USB keyboard. When enabled, any attached USB mouse or USB keyboard can control the system even when there is no USB driver loaded onto the system.	**Enabled** Disabled
USB Storage Emulation	If set to Auto, a USB devices with a capacity of equal or less than 2 GB will be emulated as a bootable floppy disk.	**Auto** Floppy Hard Disk
Onboard Graphics Controller	Enables or disables the onboard graphics controller.	**Enabled** Disabled
Onboard Audio Controller	Enables or disables the onboard audio controller.	**Enabled** Disabled
Onboard LAN Controller	Enables or disables the onboard LAN controller.	**Enabled** Disabled
Onboard LAN Option ROM	Enables or disables the onboard LAN option ROM function.	Enabled **Disabled**

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Power Management Setup

Power Management Setup
ACPI Suspend Mode [S3 (STR)]
Deep Power Off Mode [Enabled]
Power On by RTC Alarm [Disabled]
Power On by PCIE Devices [Disabled]
Power On by Onboard LAN [Disabled]
Wake Up by PS/2 KB/Mouse [Enabled]
Wake Up by USB KB/Mouse [Enabled]
Restore On AC Power Loss [Last State]
Help Item
Select the ACPI state used for System Suspend.
↑↓←→:Move
Enter:Select
+/-/:Value
ESC:Exit
F1:General Help
F9:Load Default Settings
F10:Save and Exit

Field	Description	Value
ACPI Suspend Mode	Use this item to define how your system suspends. Default value is S3 (STR), the suspend mode is suspend to RAM, i.e., the system shuts down with the exception of a refresh current to the system memory	**S3 (STR)** S1 (POS)
Deep Power Off Mode	Enables or disables compliance to the Energy-using Products Lot 6 Directives (EuP Lot 6).	**Enabled** Disabled
Power On by RTC Alarm	Enables or disables the system to wake up from a power-saving mode when an RTC alarm occurs	Enabled **Disabled**
Power On by PCIE Devices	Enables or disables the system to wake up from a power-saving mode when an event occurs on an installed PCI Express device	Enabled **Disabled**
Power On by PCI Devices	Enables or disables the system to wake up from a power-saving mode when an event occurs on an installed PCI device.	Enabled **Disabled**
Power On by Modem Ring	Enables or disables the system to wake up from a power-saving mode when a modem signal is received. network message	Enabled **Disabled**
Power On by Onboard LAN	Enables or disables the system to wake up from a power-saving mode when the onboard LAN controller received a network message	Enabled **Disabled**
Wake Up by PS/2 KB/ Mouse	Enables or disables the system to wake up from a power-saving mode when a PS/2 keyboard or mouse is used.	**Enabled** Disabled

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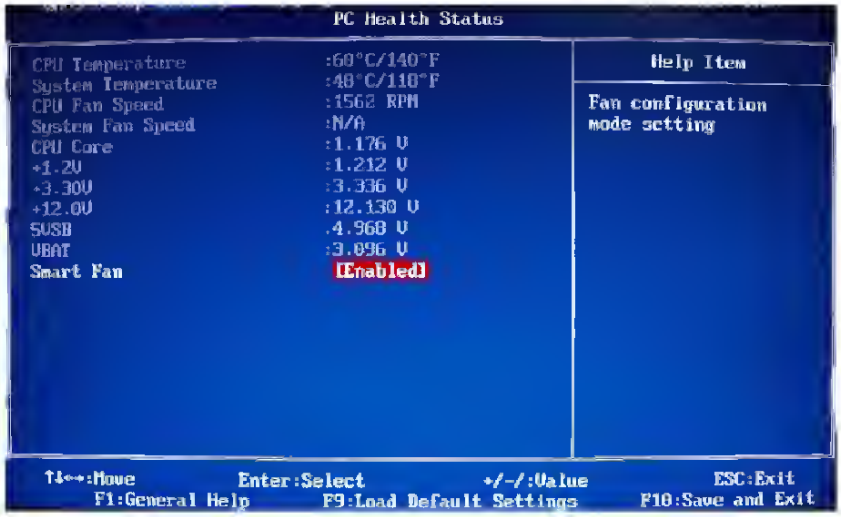
PC Health Status



Field	Description	Value
CPU Temperature System Temperature CPU Fan Speed System Fan Speed CPU Core +1.2V +3.30V +5.00V +12.0V 5VSB VBAT	These items lets you monitor the parameters for critical voltages, temperatures and fan speeds.	

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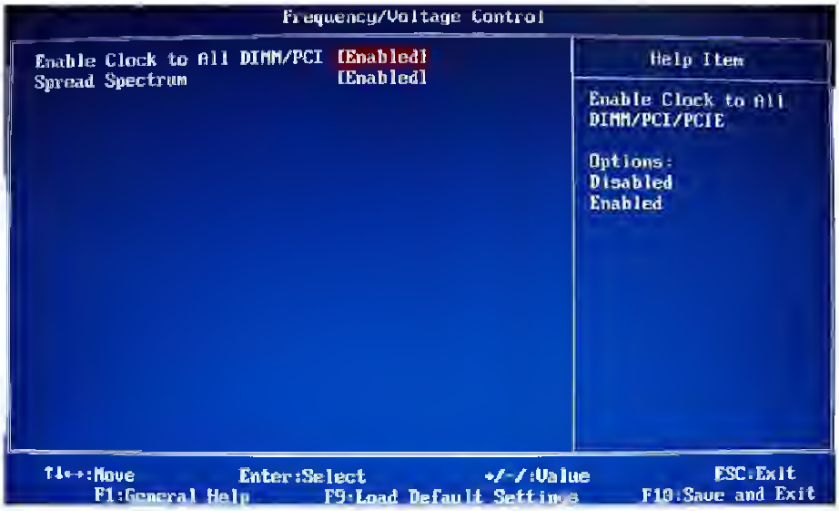
Frequency/Voltage Control



Field	Description	Value
Enable Clock to All DIMM/ PCI	When enabled, clock signals will be sent to the PCI and memory slots regardless of whether the slot is occupied or not.	**Enabled** Disabled
Spread Spectrum	When the mainboard's clock generator pulses, the extreme values of the pulses creates EMI (electromagnetic interference). Set this field to Enabled to reduce this EMI level. This reduces interference problems with other electronics in the area. **Note**: Remember to disable the Spread Spectrum feature if you are overclocking. A slight jitter can introduce a temporary boost in clock speed causing the overclocked processor to lock up.	**Enabled** Disabled

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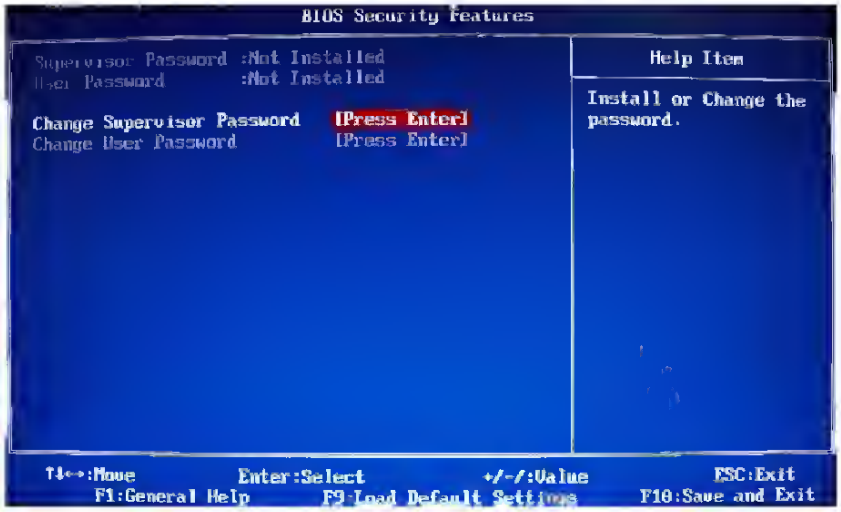
BIOS Security Features



Field	Description
Supervisor Password	Displays the supervisor password status. When set to Installed, this password will allow the user to access and change all settings in the Setup Utility.
User Password	Displays the user password status. Only the following menus will be accessible when this password is set as Installed. • System Date and System Time • Exit Without Saving
Change Supervisor Password	Press **Enter** to change the supervisor password.

Setting a system password

Note the following before you define a system password:

- The maximum length of password contains 8 alphanumeric characters—A - Z, 0 - 9, and ',' (for French keyboard)
- System passwords are case-insensitive.
- When you are prompted to enter a password, you have three tries before the system halts. Do not forget your password. If you forget your password, you may have to return your computer to your dealer to reset it.

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To set a system password:

NOTE You need to set a supervisor password first before setting the user password.

1. Select Change Supervisor Password or Change User Password, then press **Enter**.

   The password box appears.
2. Type a password then press **Enter**.

IMPORTANT Be very careful when typing your password because the characters do not appear on the screen. Only shaded blocks representing each typed character are visible.

3. Retype the password to verify the first entry, then press **Enter**.

   You will be prompted to save the new password.
4. Press **Enter**.
5. Press **F10** to save the password and close the Setup Utility.

To change a system password:

1. Select Change Supervisor Password or Change User Password, then press **Enter**.

   The password box appears.
2. Type the original password, then press **Enter**.
3. Type a new password, then press **Enter**.
4. Retype the new password to verify the first entry, then press **Enter**.

   You will be prompted to save the new password.
5. Press **Enter**.
6. Press **F10** to save the password and close the Setup Utility.

To remove a system password:

NOTE When the supervisor password is removed, the user password will also be remove.

1. Select Change Supervisor Password or Change User Password, then press **Enter**.

   The password box appears.
2. Type the original password, then press **Enter**.
3. Press **Enter** twice without entering anything in the new and confirm password fields.

   You will be prompted to confirm the password removal.
4. Press **Enter**.
5. Press **F10** to save the changes you made and close the Setup Utility.

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Load Default Settings

Execute this menu to load the factory-default settings for all Setup parameters. Keyboard shortcut: F9

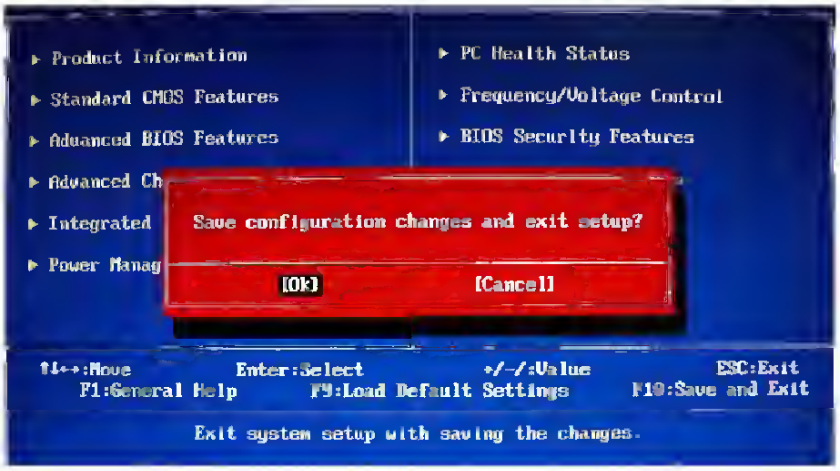
Perform the steps below to load the system default settings:

1. Select Load Default Settings, then press **Enter**.

   You will be prompted to load the system defaults.
2. Select **OK**, then press **Enter**.
3. Press **F10** to save the changes you made and close the Setup Utility.

Save & Exit Setup

Execute this menu to save the changes made and closes the Setup Utility. Keyboard shortcut: F10



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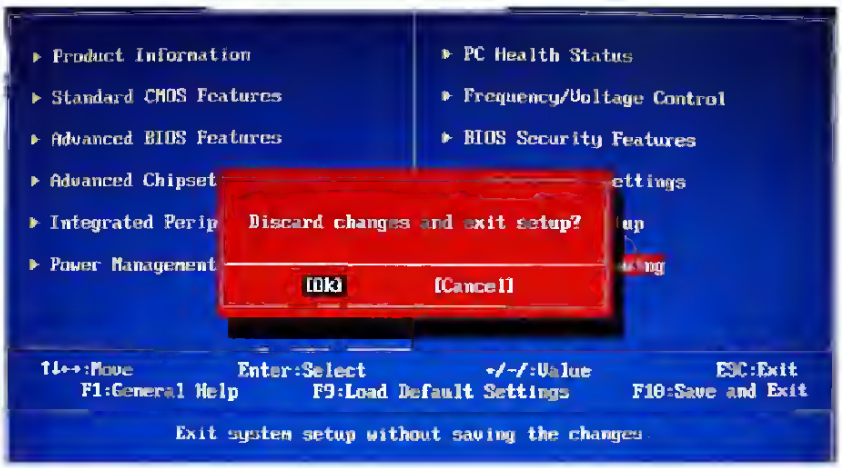
Exit Without Saving

Execute this menu to closes the Setup Utility without making any changes



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Chapter 3

System Disassembly

This chapter provides step-by-step instructions on how to disassemble the computer for maintenance and troubleshooting purposes.

Disassembly Tools

In performing the disassembly process, you will need the following tools:

- Wrist-grounding strap and conductive mat for preventing electrostatic discharge
- Philips screwdriver
- Flat screwdriver

NOTES
- To reinstall the system components and assemble the unit, perform the disassembly procedures in reverse.
- The screws for the different components vary in size. During the disassembly process, group the screws with their corresponding components to avoid mismatches when putting back the components.

Pre-disassembly Procedure

Before proceeding with the disassembly procedure, perform the steps listed below:

1. Make sure that the optical disc drive and the optional card reader slots are empty.
2. Turn off the power to the computer and all peripherals.
3. Unplug the power cord from the computer.
4. Unplug the network cable and all connected peripheral devices from the computer.
5. Place the computer on a flat, steady surface.

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Disassembly Procedures

Removing the Side Panel

1. Remove the two screws located on the rear edge of the side panel

2. Slide the panel back about 2 5 cm (1 0 in) to release it from the chassis notches, then detach the panel from the chassis
3. Put the side panel aside for reinstallation later

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Removing the Front Bezel

1. Release the front bezel retention tabs from the chassis interior

2. Pull the front bezel away from the chassis

NOTE: The power switch and LED cable from the front bezel is still connected to its connector on the mainboard. To detach the front bezel completely, you have to remove the hard disk and optical drive.

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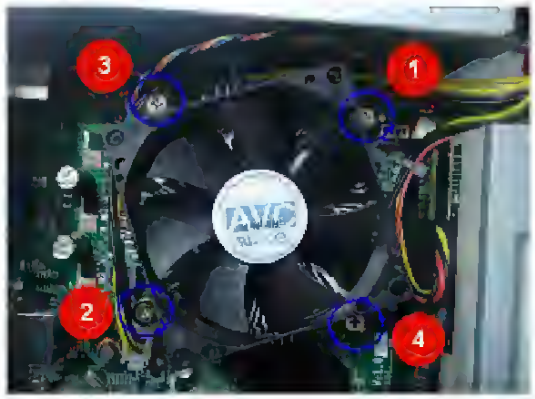
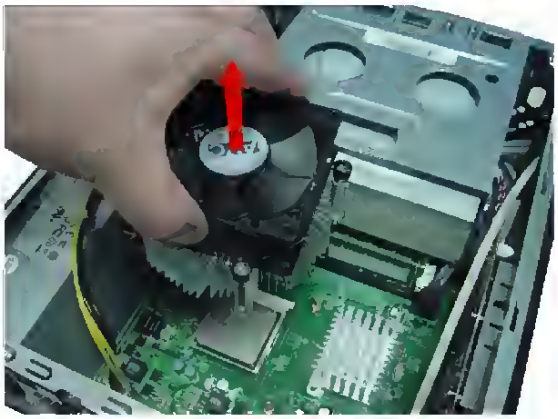
Removing the Heat Sink Fan Assembly

WARNING: The heat sink becomes very hot when the system is on. NEVER touch the heat sink with any metal or with your hands.

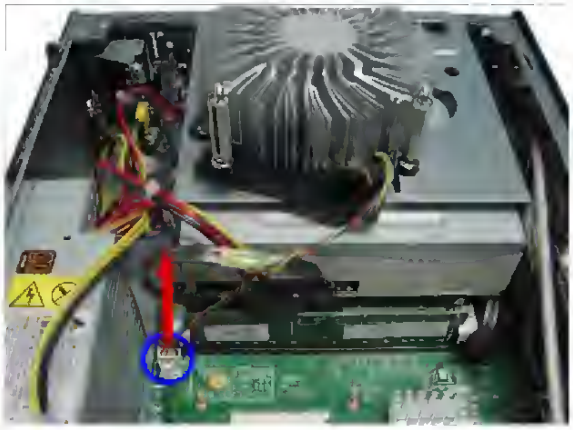
1. Use a long-nosed screwdriver to loosen the four screws on the heat sink, in the order as shown below.



2. Lift the heat sink fan assembly away from the mainboard.



3. Lay down the heat sink fan assembly, in an upright position, on top of the optical drive, as shown below, then disconnect the fan cable from the mainboard.



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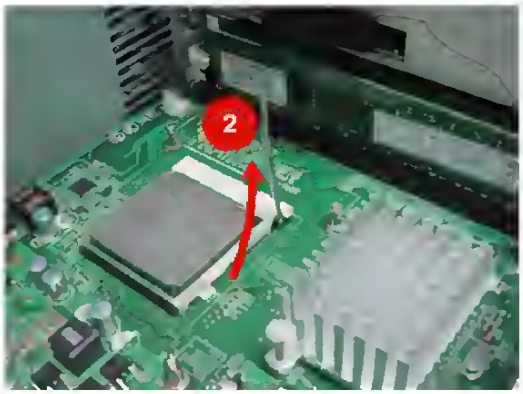
Removing the Processor

IMPORTANT:IBefore removing a processor from the mainboard, make sure to create a backup file of all important data.

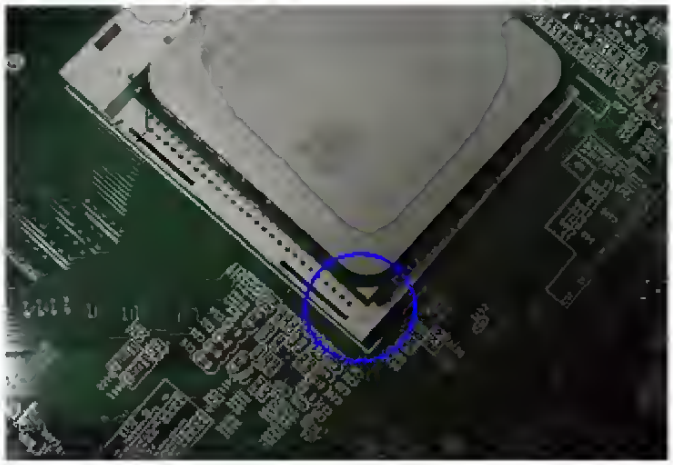
WARNING: The processor becomes very hot when the system is on. Allow it to cool off first before handling.

1. Release the load lever (1).

2. Pull the load lever to the fully open, upright position (2).
3. Pull out the processor from the socket.



IMPORTANT: If you are going to install a new processor, note the arrow on the corner to make sure the processor is properly oriented over the socket.



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Removing the HDD-ODD Bracket

1. Remove the two screws that secure the HDD-ODD bracket to the chassis

2. Lift the bracket up and turn it over.

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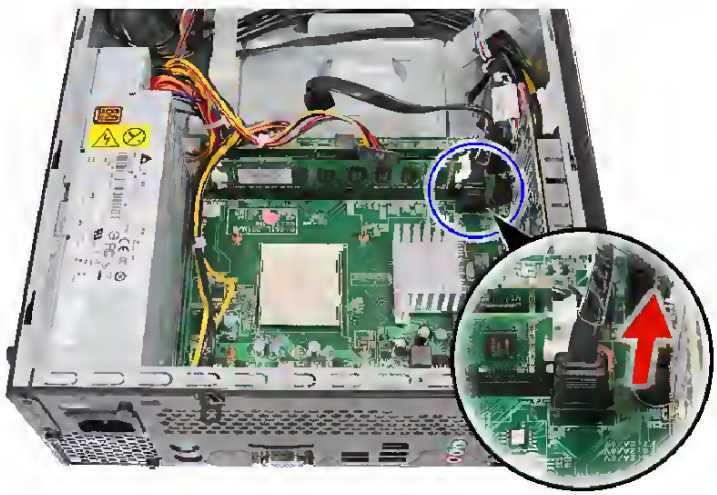
Removing the Optical Drive and the Hard Disk Drive

1. Disconnect the SATA and power cables from the rear of the optical drive

2. Disconnect the other end of the SATA cable from the mainboard



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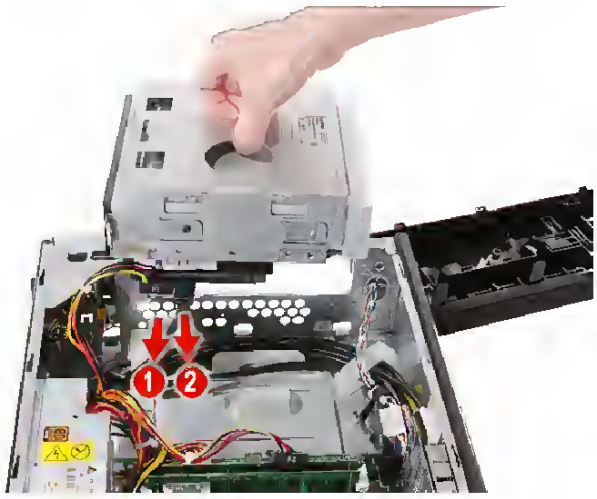
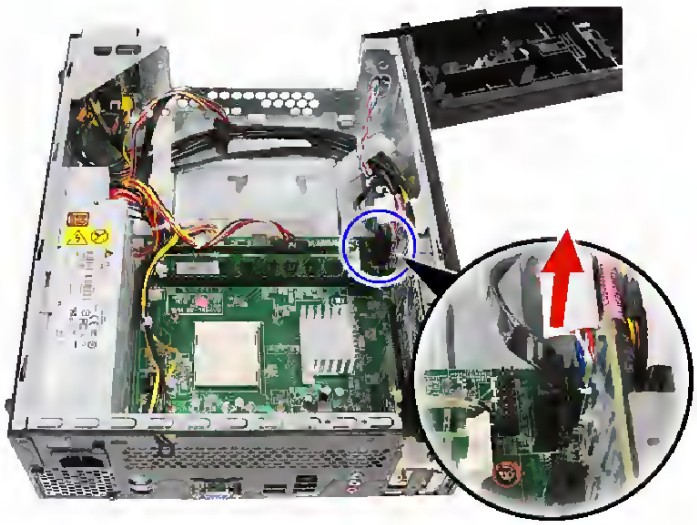
3. Disconnect the SATA and power cables from the rear of the hard disk drive.



4. Disconnect the other end of the SATA cable from the mainboard.



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5. Remove the screws that secure the optical drive to the HDD-ODD bracket.

6. Pull the optical drive out of the drive bay.

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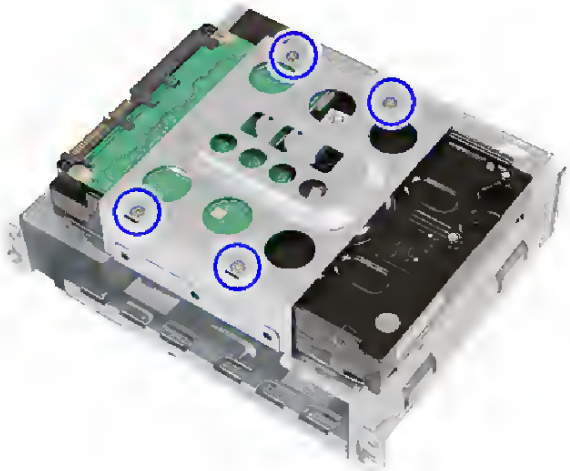
7. Remove the four screws that secure the hard disk drive to the HDD bracket



8. Slide the hard disk drive out of the bracket

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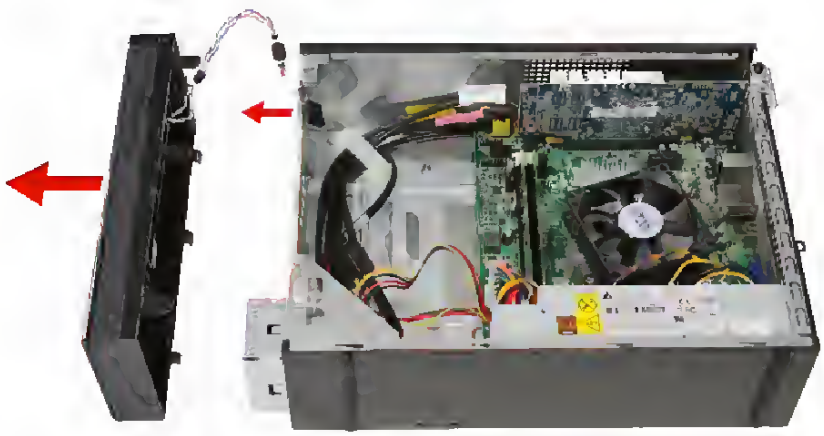
Removing the Front Bezel

1. Disconnect the power button/LED cable from its mainboard connector

2. Pull out the power button/LED cable from the chassis.



3. Detach the front bezel.

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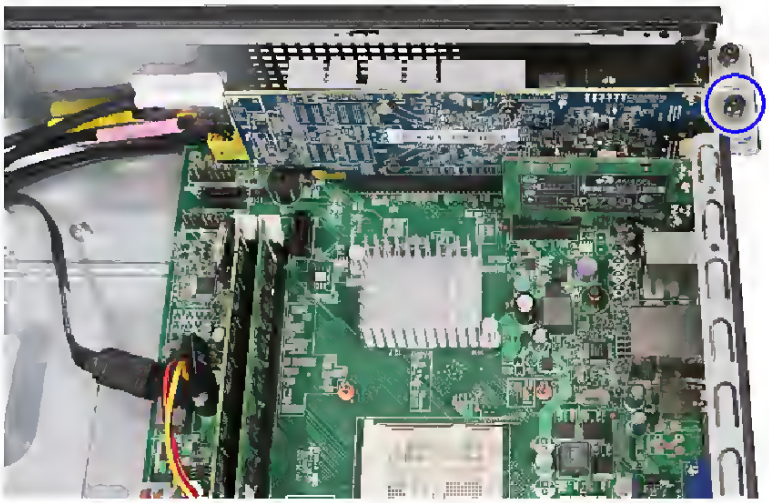
Removing the Expansion Boards

1. Remove the screw from the expansion board bracket opposite the PCIEX2 slot



2. Gently pull up the expansion board to remove it from the mainboard

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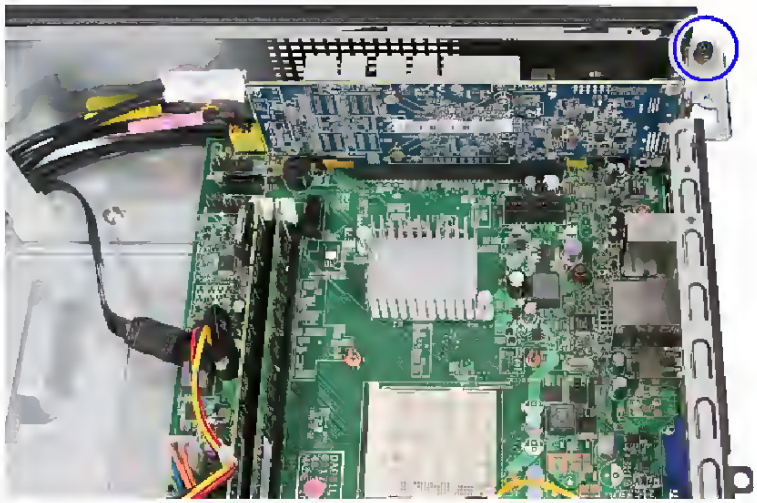
3. Remove the screw from the expansion board bracket opposite the PCI_1 slot



4. Gently pull up the expansion board to remove it from the mainboard

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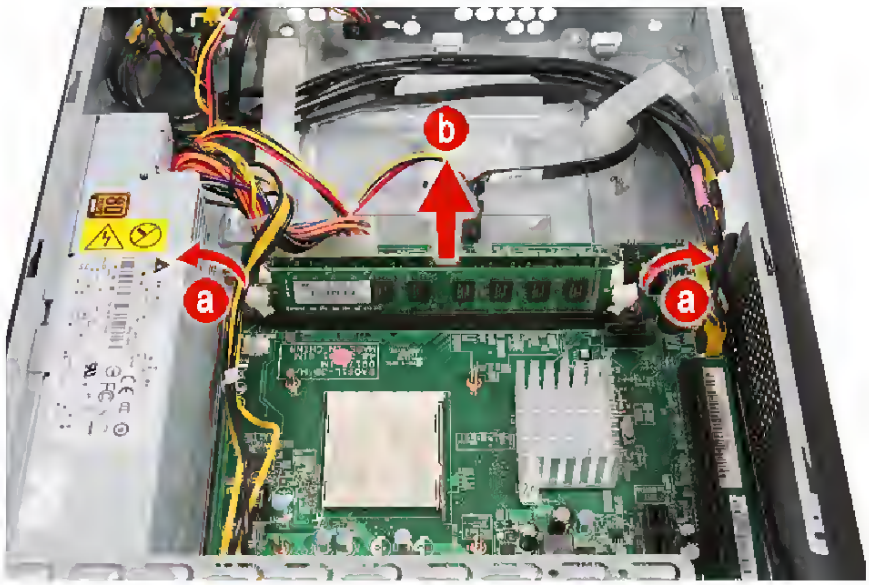
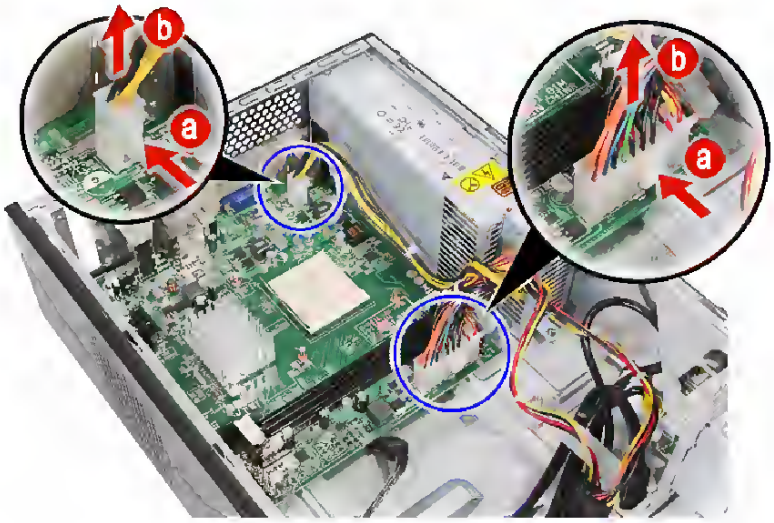
Removing the Memory Modules

1. Open the holding clips (**a**) securing the memory modules
2. Gently pull the DIMM upward to pull it away from the chassis (**b**)



Removing the Power Supply Unit

1. Disconnect the 4-pin and the 24-pin ATX power supply cables from its mainboard connector.
   a. Squeeze on the retaining latch (**a**) attached to the cable end of the connector
   b. Grasp the cable end of the connector and pull it straight up (**b**)



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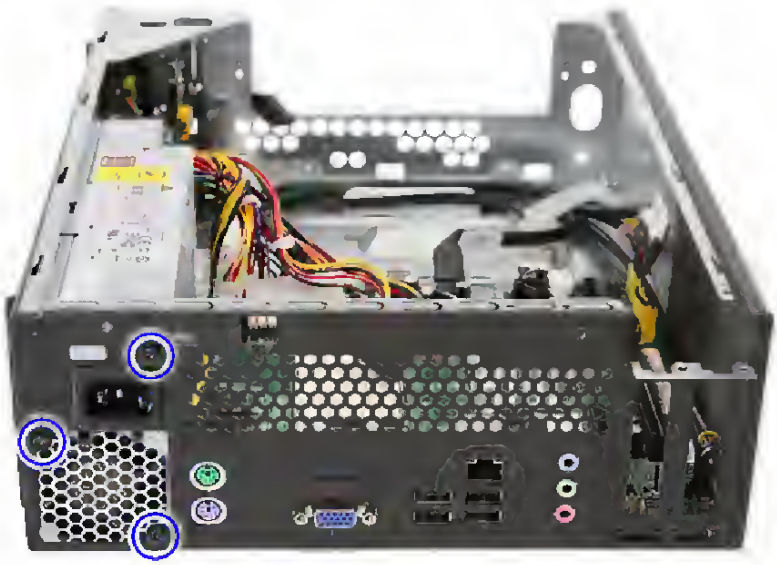
2. Remove the screw that secures the power supply to the chassis.

3. Remove the three screws that secure the power supply to the rear panel.



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4. Lift the power supply module out of the chassis.

Removing the Front I/O and Optional Card Reader Assemblies

1. Disconnect the front I/O and optional card reader cables from their mainboard connectors.

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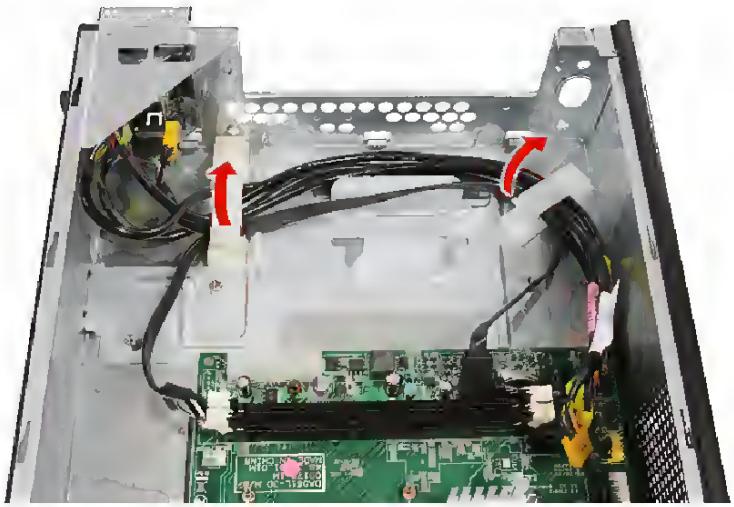
2. Pull up the plastic clips to release the cables.



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3. Remove the optional card reader assembly

   a. Remove the two screws that secure the optional card reader assembly to the bracket

   b. Pull the optional card reader assembly out of the bracket

4. Remove the front I/O and optional card reader board bracket.

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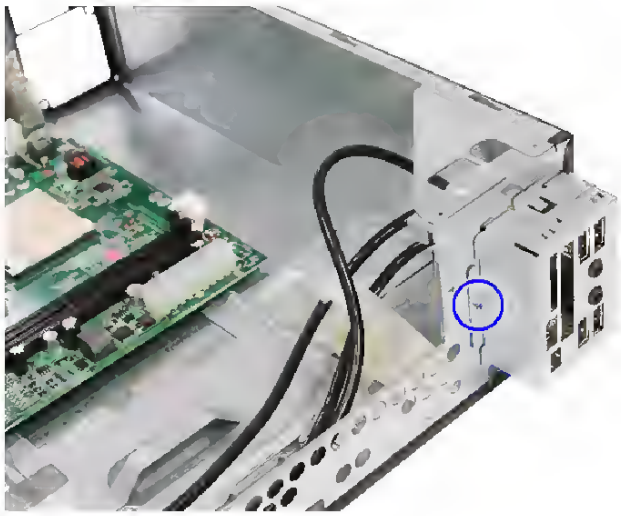
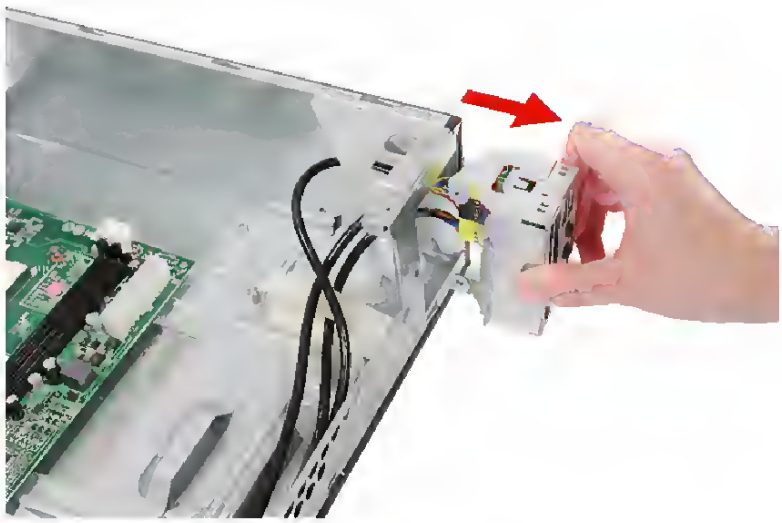
a. Remove the screw that secures the bracket to the chassis.



b. Pull the bracket out the chassis.



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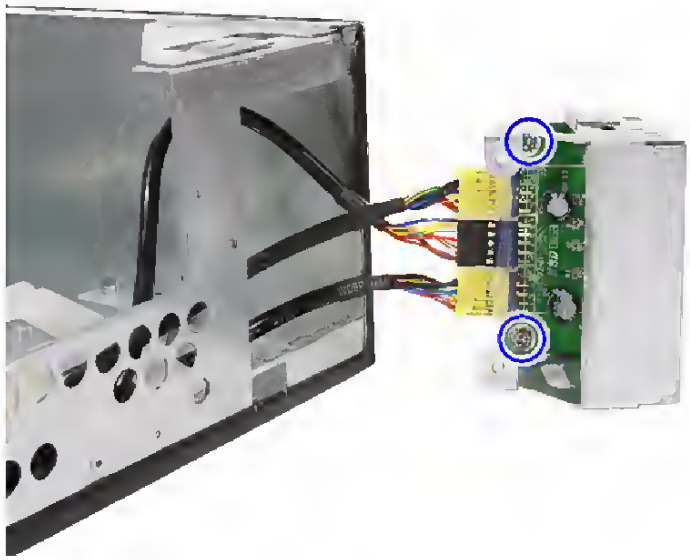
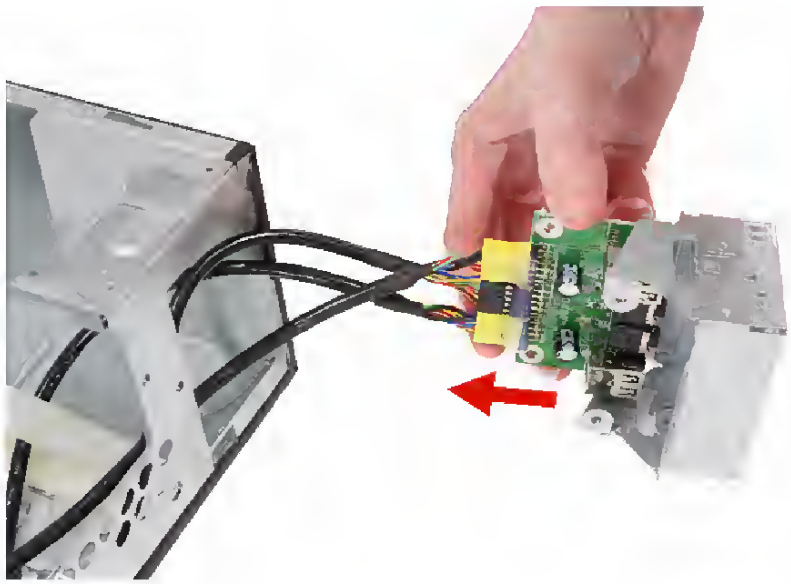
5. Remove the front I/O assembly

   a. Remove the two screws that secure the front I/O assembly to the bracket



   b. Remove front I/O assembly from the bracket



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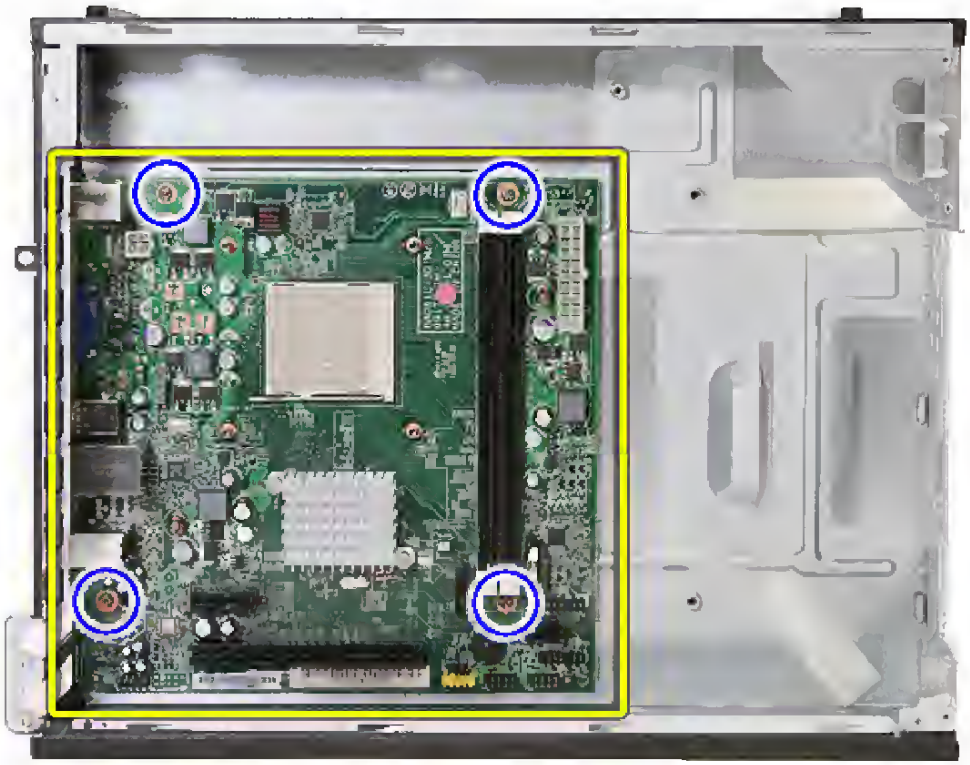
Removing the Mainboard

1. Remove the four screws that secure the mainboard to the chassis



Note: Circuit boards >10 cm2 has been highlighted with the yellow rectangle as above image shows Please detach the Circuit boards and follow local regulations for disposal

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2. Lift the board from the chassis

3. Remove the RTC battery

Note:RTC battery has been highlighted with the yellow circle as above image shows. Please detach the RTC battery and follow local regulations for disposal.

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Chapter 4

Troubleshooting

This chapter lists the POST error indicators and BIOS beep codes, as well general troubleshooting instructions

Hardware Diagnostic Procedure

1. Obtain as much detail as possible about the symptoms of the system failure
2. Verify the symptoms by attempting to recreate the failure by running the diagnostic tests or repeating the same operation
3. Refer to "Power System Check" procedure on the next section and the "Beep Codes" section on page 60 to determine which corrective action to take

System Check Procedures

IMPORTANT The diagnostic tests described in this chapter are only intended to test Acer products. Non-Acer products, prototype cards, or modified options can give false errors and invalid system responses

Power System Check

If the system can be powered on, skip this section. Proceed to the "System Internal Inspection" procedure on the next page.

If the system will not power on, do the following

- Check if the power cable is properly connected to the AC power jack and a functional AC power source
- Check if the voltage selector switch is set to the correct voltage setting

System External Inspection

1. Inspect the power and LED indicators on the front panel. Go to "Front View" section on page 4 for the location and description of the LED behaviour
2. Make sure that the ventilation slots on the rear panel are not blocked
3. Make sure that there is no point of contact in the system that can cause a power short

   If the cause of the failure is still can not be determined, perform the "System Internal Inspection" procedure described on the next page

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System Internal Inspection

1. Turn off the power to the computer and all peripherals
2. Unplug the power cord from the computer
3. Unplug the network cable and all connected peripheral devices from the computer
4. Place the computer on a flat, steady surface
5. Remove the side panel as described in page 24.
6. Verify that the processor, memory module(s), and expansion board(s) are properly seated
7. Verify that all power and data cables are firmly and properly attached to the installed drives
8. Verify that all cable connections inside the system are firmly and properly attached to their appropriate mainboard connectors
9. Verify that all components are Acer-qualified and supported
10. Reinstall the side panel
11. Power on the system.

    If the cause of the failure is still can not be determined, review the POST messages and BIOS checkpoints during the system startup

Checkpoints

A checkpoint is either a byte or word value output to I/O port 80h. The BIOS outputs checkpoints during bootblock and Power-On Self Test (POST) to indicate the task the system is currently executing. Checkpoints are very useful in aiding software developers or technicians in debugging problems that occur during the pre-boot process

Viewing BIOS Checkpoints

Viewing all checkpoints generated by the BIOS requires a checkpoint card, also referred to as a POST card or POST diagnostic card. These are ISA or PCI add-in cards that show the value of I/O port 80h on a LED display. Checkpoints may appear on the bottom right corner of the screen during POST. This display method is limited, since it only displays checkpoints that occur after the video card has been activated.

NOTE Please note that checkpoints may differ between different platforms based on system configuration. Checkpoints may change due to vendor requirements, system chipset or option ROMs from add-in PCI devices.

Boot Block Initialization Code Checkpoints

The boot block initialization code sets up the chipset, memory, and other components before system memory is available. The following table describes the type of checkpoints that may occur during the boot block initialization portion of the BIOS.

Checkpoint	Description
Before D1	Early chipset initialization is done. Early super I/O initialization is done including RTC and keyboard controller. NMI is disabled.
D1	Perform keyboard controller BAT test. Check if waking up from power management suspend state. Save power-on CPUID value in scratch CMOS.
D0	Go to flat mode with 4GB limit and GA20 enabled. Verify the bootblock checksum.
D2	Disable CACHE before memory detection. Execute full memory sizing module. Verify that flat mode is enabled.
D3	If memory sizing module not executed, start memory refresh and do memory sizing in bootblock code. Do additional chipset initialization. Re-enable CACHE. Verify that flat mode is enabled.
D4	Test base 512 KB memory. Adjust policies and cache first 8 MB. Set stack.

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Checkpoint	Description
D5	Bootblock code is copied from ROM to lower system memory and control is given to it BIOS now executes out of RAM.
D6	Both key sequence and OEM specific method is checked to determine if BIOS recovery is forced. Main BIOS checksum is tested. If BIOS recovery is necessary, control flows to checkpoint E0. See the "Boot Block Recovery Code Checkpoints" section for more information.
D7	Restore CPUID value back into register. The Bootblock Runtime interface module is moved to system memory and control is given to it. Determine whether to execute serial flash.
D8	The Runtime module is uncompressed into memory. CPUID information is stored in memory.
D9	Store the Uncompressed pointer for future use in PMM. Copying Main BIOS into memory. Leaves all RAM below 1 MB Read-Write including E000 and F000 shadow areas but closing SMRAM.
DA	Restore CPUID value back into register. Give control to BIOS POST (ExecutePOSTKernel). See the "POST Code Checkpoints" section for more information.

Boot Block Recovery Code Checkpoints

The boot block recovery code gets control when the BIOS determines that a BIOS recovery is required because the user has forced the update or the BIOS checksum is corrupt. Refer to "BIOS Recovery" section on page 61 for more information. The following table describes the type of checkpoints that may occur during the boot block recovery portion of the BIOS.

Checkpoint	Description
E0	Initialize the floppy controller in the super I/O. Some interrupt vectors are initialized. DMA controller is initialized. 8259 interrupt controller is initialized. L1 cache is enabled.
E9	Set up floppy controller and data. Attempt to read from floppy.
EA	Enable ATAPI hardware. Attempt to read from ARMD and ATAPI CDROM.
EB	Disable ATAPI hardware. Jump back to checkpoint E9.
EF	Read error occurred on media. Jump back to checkpoint EB.
E9 or EA	Determine information about root directory of recovery media.
F0	Search for pre-defined recovery file name in root directory.
F1	Recovery file not found.
F2	Start reading FAT table and analyze FAT to find the clusters occupied by the recovery file.
F3	Start reading the recovery file cluster by cluster.
F5	Disable L1 cache.
FA	Check the validity of the recovery file configuration to the current configuration of the flash part.
FB	Make flash write enabled through chipset and OEM specific method. Detect proper flash part. Verify that the found flash part size equals the recovery file size.
F4	The recovery file size does not equal the found flash part size.
FC	Erase the flash part.
FD	Program the flash part.
FF	The flash has been updated successfully. Make flash write disabled. Disable ATAPI hardware. Restore CPUID value back into register. Give control to F000 ROM at F000:FFF0h.

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POST Code Checkpoints

The POST code checkpoints are the largest set of checkpoints during the BIOS preboot process. The following table describes the type of checkpoints that may occur during the POST portion of the BIOS.

Checkpoint	Description
03	Disable NMI, Parity, video for EGA, and DMA controllers. Initialize BIOS, POST, Runtime data area. Also initialize BIOS modules on POST entry and GPNV area. Initialized CMOS as mentioned in the Kernel Variable "wCMOSFlags."
04	Check CMOS diagnostic byte to determine if battery power is OK and CMOS checksum is OK. Verify CMOS checksum manually by reading storage area. If the CMOS checksum is bad, update CMOS with power-on default values and clear passwords. Initialize status register A. Initializes data variables that are based on CMOS setup questions. Initializes both the 8259 compatible PICs in the system.
05	Initializes the interrupt controlling hardware (generally PIC) and interrupt vector table.
06	Do R/W test to CH-2 count reg. Initialize CH-0 as system timer. Install the POSTINT1Ch handler. Enable IRQ-0 in PIC for system timer interrupt. Traps INT1Ch vector to "POSTINT1ChHandlerBlock."
08	Initializes the CPU. The BAT test is being done on KBC. Program the keyboard controller command byte is being done after Auto detection of KB/MS using AMI KB-5.
0A	Initializes the 8042 compatible Key Board Controller.
0B	Detects the presence of PS/2 mouse.
0C	Detects the presence of Keyboard in KBC port.
0E	Testing and initialization of different Input Devices. Also, update the Kernel Variables. Traps the INT09h vector, so that the POST INT09h handler gets control for IRQ1. Uncompress all available language, BIOS logo, and Silent logo modules.
13	Early POST initialization of chipset registers.
24	Uncompress and initialize any platform specific BIOS modules. GPNV is initialized at this checkpoint.
30	Initialize System Management Interrupt.
2A	Initializes different devices through DIM. See DIM Code Checkpoints section for more information.
2C	Initializes different devices. Detects and initializes the video adapter installed in the system that have optional ROMs.
2E	Initializes all the output devices.
31	Allocate memory for ADM module and uncompress it. Give control to ADM module for initialization. Initialize language and font modules for ADM. Activate ADM module.
33	Initializes the silent boot module. Set the window for displaying text information.
37	Displaying sign-on message, CPU information, setup key message, and any OEM specific information.
38	Initializes different devices through DIM. See DIM Code Checkpoints section for more information. USB controllers are initialized at this point.
39	Initializes DMAC-1 & DMAC-2.
3A	Initialize RTC date/time.
3B	Test for total memory installed in the system. Also, Check for DEL or ESC keys to limit memory test. Display total memory in the system.

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Checkpoint	Description
3C	Mid POST initialization of chipset registers
40	Detect different devices (Parallel ports, serial ports, and coprocessor in CPU, ... etc) successfully installed in the system and update the BDA, EBDA ... etc
50	Programming the memory hole or any kind of implementation that needs an adjustment in system RAM size if needed
52	Updates CMOS memory size from memory found in memory test. Allocates memory for Extended BIOS Data Area from base memory. Programming the memory hole or any kind of implementation that needs an adjustment in system RAM size if needed
60	Initializes Num-Lock status and programs the KBD typematic rate
75	Initialize Int-13 and prepare for IPL detection
78	Initializes IPL devices controlled by BIOS and option ROMs
7A	Initializes remaining option ROMs
7C	Generate and write contents of ESCD in NVRam
84	Log errors encountered during POST
85	Display errors to the user and gets the user response for error
87	Execute BIOS setup if needed / requested. Check boot password if installed
8C	Late POST initialization of chipset registers
8E	Program the peripheral parameters. Enable/Disable NMI as selected
90	Late POST initialization of system management interrupt
A0	Check boot password if installed
A1	Clean-up work needed before booting to OS
A2	Takes care of runtime image preparation for different BIOS modules. Fill the free area in F000h segment with 0FFh. Initializes the Microsoft IRQ Routing Table. Prepares the runtime language module. Disables the system configuration display if needed
A4	Initialize runtime language module. Display boot option popup menu
A7	Displays the system configuration screen if enabled. Initialize the CPU's before boot, which includes the programming of the MTRR's
A8	Prepare CPU for OS boot including final MTRR values
A9	Wait for user input at config display if needed
AA	Uninstall POST INT1Ch vector and INT09h vector. Deinitializes the ADM module
AB	Prepare BBS for Int 19 boot
AC	End of POST initialization of chipset registers
B1	Save system context for ACPI
00	Passes control to OS Loader (typically INT19h)

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DIM Code Checkpoints

The Device Initialization Manager (DIM) gets control at various times during BIOS POST to initialize different system busses. The following table describes the main checkpoints where the DIM module is accessed.

Checkpoint	Description
2A	Initialize different buses and perform the following functions: Reset, Detect, and Disable (function 0), Static Device Initialization (function 1), Boot Output Device Initialization (function 2). Function 0 disables all device nodes, PCI devices, and PnP ISA cards. It also assigns PCI bus numbers. Function 1 initializes all static devices that include manual configured onboard peripherals, memory and I/O decode windows in PCI-PCI bridges, and noncompliant PCI devices. Static resources are also reserved. Function 2 searches for and initializes any PnP, PCI, or AGP video devices.
38	Initialize different buses and perform the following functions: Boot Input Device Initialization (function 3), IPL Device Initialization (function 4), General Device Initialization (function 5). Function 3 searches for and configures PCI input devices and detects if system has standard keyboard controller. Function 4 searches for and configures all PnP and PCI boot devices. Function 5 configures all onboard peripherals that are set to an automatic configuration and configures all remaining PnP and PCI devices.

POST Error Indicators

When a system error is detected during POST (Power On Self Text), the Setup utility will switch to diagnostic mode and will either:

- Displays a POST error message, or
- Emits a series of beep codes

POST Error Messages

POST error messages tell users what failure the system has detected. Some error messages could be related to a hardware device. Others may indicate a problem with a device configuration. In some cases an error message may include recommendations for troubleshooting or require that you press the **Enter** key to display recommendations. Follow the instructions on the screen. It is recommended that you correct the error before proceeding, even if the computer appears to boot successfully.

IMPORTANT If your system fails after you make changes in the Setup menus, reboot the computer, enter Setup again and load Setup defaults to correct the error.

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Memory

Message	Description
Gate20 Error	The BIOS is unable to properly control the mainboard's Gate A20 function, which controls access of memory over 1 MB. This may indicate a problem with the mainboard.
Multi-Bit ECC Error	This message will only occur on systems using ECC enabled memory modules. ECC memory has the ability to correct single-bit errors that may occur from faulty memory modules. A multiple bit corruption of memory has occurred, and the ECC memory algorithm cannot correct it. This may indicate a defective memory module.
Parity Error	Fatal Memory Parity Error. System halts after displaying this message.
RAM R/W test failed	This message is displayed by the AMIBIOS8 when the RAM read/write test fails.
CMOS Memory Size Wrong	The base memory (memory below 1MB) size that is reported in the CMOS (offset 15h) mismatches with the actual size detected. This condition may occur when the hole is set at 512K base memory or when CMOS is corrupted.

Boot

Message	Description
Boot Failure	This is a generic message indicating the BIOS could not boot from a particular device. This message is usually followed by other information concerning the device.
Invalid Boot Diskette	A diskette was found in the drive, but it is not configured as a bootable diskette.
Drive Not Ready	The BIOS was unable to access the drive because it indicated it was not ready for data transfer. This is often reported by drives when no media is present.
A: Drive Error	The BIOS attempted to configure the A: drive during POST, but was unable to properly configure the device. This may be due to a bad cable or faulty diskette drive.
B: Drive Error	The BIOS attempted to configure the B: drive during POST, but was unable to properly configure the device. This may be due to a bad cable or faulty diskette drive.
Insert BOOT diskette in A:	The BIOS attempted to boot from the A: drive, but could not find a proper boot diskette. Reboot and Select proper Boot device or Insert Boot Media in selected Boot device. BIOS could not find a bootable device in the system and/or removable media drive does not contain media.
Reboot and select proper boot device or Insert boot media in selected boot device	BIOS could not find a bootable device in the system and/or removable media drive does not contain media.
NO ROM BASIC	This message occurs on some systems when no bootable device can be detected.

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Storage Device

Message	Description
Primary Master Hard Disk Error	The IDE/ATAPI device configured as Primary Master could not be properly initialized by the BIOS. This message is typically displayed when the BIOS is trying to detect and configure IDE/ATAPI devices in POST.
Primary Slave Hard Disk Error	The IDE/ATAPI device configured as Primary Slave could not be properly initialized by the BIOS. This message is typically displayed when the BIOS is trying to detect and configure IDE/ATAPI devices in POST.
Secondary Master Hard Disk Error	The IDE/ATAPI device configured as Secondary Master could not be properly initialized by the BIOS. This message is typically displayed when the BIOS is trying to detect and configure IDE/ATAPI devices in POST.
Secondary Slave Hard Disk Error	The IDE/ATAPI device configured as Secondary Slave could not be properly initialized by the BIOS. This message is typically displayed when the BIOS is trying to detect and configure IDE/ATAPI devices in POST.
3rd Master Hard Disk Error	The IDE/ATAPI device configured as Master in the 3rd IDE controller could not be properly initialized by the BIOS. This message is typically displayed when the BIOS is trying to detect and configure IDE/ATAPI devices in POST.
3rd Slave Hard Disk Error	The IDE/ATAPI device configured as Slave in the 3rd IDE controller could not be properly initialized by the BIOS. This message is typically displayed when the BIOS is trying to detect and configure IDE/ATAPI devices in POST.
4th Master Hard Disk Error	The IDE/ATAPI device configured as Master in the 4th IDE controller could not be properly initialized by the BIOS. This message is typically displayed when the BIOS is trying to detect and configure IDE/ATAPI devices in POST.
4th Slave Hard Disk Error	The IDE/ATAPI device configured as Slave in the 4th IDE controller could not be properly initialized by the BIOS. This message is typically displayed when the BIOS is trying to detect and configure IDE/ATAPI devices in POST.
5th Master Hard Disk Error	The IDE/ATAPI device configured as Master in the 5th IDE controller could not be properly initialized by the BIOS. This message is typically displayed when the BIOS is trying to detect and configure IDE/ATAPI devices in POST.
5th Slave Hard Disk Error	The IDE/ATAPI device configured as Slave in the 5th IDE controller could not be properly initialized by the BIOS. This message is typically displayed when the BIOS is trying to detect and configure IDE/ATAPI devices in POST.
6th Master Hard Disk Error	The IDE/ATAPI device configured as Master in the 6th IDE controller could not be properly initialized by the BIOS. This message is typically displayed when the BIOS is trying to detect and configure IDE/ATAPI devices in POST.
6th Slave Hard Disk Error	The IDE/ATAPI device configured as Slave in the 6th IDE controller could not be properly initialized by the BIOS. This message is typically displayed when the BIOS is trying to detect and configure IDE/ATAPI devices in POST.
Primary Master Drive - ATAPI Incompatible	The IDE/ATAPI device configured as Primary Master failed an ATAPI compatibility test. This message is typically displayed when the BIOS is trying to detect and configure IDE/ATAPI devices in POST.
Primary Slave Drive - ATAPI Incompatible	The IDE/ATAPI device configured as Primary Slave failed an ATAPI compatibility test. This message is typically displayed when the BIOS is trying to detect and configure IDE/ATAPI devices in POST.
Secondary Master Drive - ATAPI Incompatible	The IDE/ATAPI device configured as Secondary Master failed an ATAPI compatibility test. This message is typically displayed when the BIOS is trying to detect and configure IDE/ATAPI devices in POST.
Secondary Slave Drive - ATAPI Incompatible	The IDE/ATAPI device configured as Secondary Slave failed an ATAPI compatibility test. This message is typically displayed when the BIOS is trying to detect and configure IDE/ATAPI devices in POST.
3rd Master Drive - ATAPI Incompatible	The IDE/ATAPI device configured as Master in the 3rd IDE controller failed an ATAPI compatibility test. This message is typically displayed when the BIOS is trying to detect and configure IDE/ATAPI devices in POST.

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Message	Description
3rd Slave Drive - ATAPI Incompatible	The IDE/ATAPI device configured as Slave in the 3rd IDE controller failed an ATAPI compatibility test. This message is typically displayed when the BIOS is trying to detect and configure IDE/ATAPI devices in POST.
4th Master Drive - ATAPI Incompatible	The IDE/ATAPI device configured as Master in the 4th IDE controller failed an ATAPI compatibility test. This message is typically displayed when the BIOS is trying to detect and configure IDE/ATAPI devices in POST.
4th Slave Drive - ATAPI Incompatible	The IDE/ATAPI device configured as Slave in the 4th IDE controller failed an ATAPI compatibility test. This message is typically displayed when the BIOS is trying to detect and configure IDE/ATAPI devices in POST.
5th Master Drive - ATAPI Incompatible	The IDE/ATAPI device configured as Master in the 5th IDE controller failed an ATAPI compatibility test. This message is typically displayed when the BIOS is trying to detect and configure IDE/ATAPI devices in POST.
5th Slave Drive - ATAPI Incompatible	The IDE/ATAPI device configured as Slave in the 5th IDE controller failed an ATAPI compatibility test. This message is typically displayed when the BIOS is trying to detect and configure IDE/ATAPI devices in POST.
6th Master Drive - ATAPI Incompatible	The IDE/ATAPI device configured as Master in the 6th IDE controller failed an ATAPI compatibility test. This message is typically displayed when the BIOS is trying to detect and configure IDE/ATAPI devices in POST.
6th Slave Drive - ATAPI Incompatible	The IDE/ATAPI device configured as Slave in the 6th IDE controller failed an ATAPI compatibility test. This message is typically displayed when the BIOS is trying to detect and configure IDE/ATAPI devices in POST.
S.M.A.R.T. Capable but Command Failed	The BIOS tried to send a S.M.A.R.T. message to a hard disk, but the command transaction failed. This message can be reported by an ATAPI device using the S.M.A.R.T. error reporting standard. S.M.A.R.T. failure messages may indicate the need to replace the hard disk.
S.M.A.R.T. Command Failed	The BIOS tried to send a S.M.A.R.T. message to a hard disk, but the command transaction failed. This message can be reported by an ATAPI device using the S.M.A.R.T. error reporting standard. S.M.A.R.T. failure messages may indicate the need to replace the hard disk.
S.M.A.R.T. Status BAD, Backup and Replace	A S.M.A.R.T. capable hard disk sends this message when it detects an imminent failure. This message can be reported by an ATAPI device using the S.M.A.R.T. error reporting standard. S.M.A.R.T. failure messages may indicate the need to replace the hard disk.
S.M.A.R.T. Capable and Status BAD	A S.M.A.R.T. capable hard disk sends this message when it detects an imminent failure. This message can be reported by an ATAPI device using the S.M.A.R.T. error reporting standard. S.M.A.R.T. failure messages may indicate the need to replace the hard disk.

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Virus-related

Message	Description
BootSector Write!!	The BIOS has detected software attempting to write to a drive's boot sector. This is flagged as possible virus activity. This message will only be displayed if Virus Detection is enabled in AMIBIOS setup.
VIRUS: Continue (Y/N)?	If the BIOS detects possible virus activity, it will prompt the user. This message will only be displayed if Virus Detection is enabled in AMIBIOS setup.

System Configuration

Message	Description
DMA-1 Error	Error initializing primary DMA controller. This is a fatal error, often indication a problem with system hardware.
DMA-2 Error	Error initializing secondary DMA controller. This is a fatal error, often indication a problem with system hardware.
DMA Controller Error	POST error while trying to initialize the DMA controller. This is a fatal error, often indication a problem with system hardware.
Checking NVRAM.. Update Failed	BIOS could not write to the NVRAM block. This message appears when the FLASH part is write-protected or if there is no FLASH part (System uses a PROM or EPROM).
Microcode Error	BIOS could not find or load the CPU Microcode Update to the CPU. This message only applies to INTEL CPUs. The message is most likely to appear when a brand new CPU is installed in a mainboard with an outdated BIOS. In this case, the BIOS must be updated to include the Microcode Update for the new CPU.
NVRAM Checksum Bad, NVRAM Cleared	There was an error in while validating the NVRAM data. This causes POST to clear the NVRAM data.
Resource Conflict	More than one system device is trying to use the same non-shareable resources (Memory or I/O).
NVRAM Ignored	The NVRAM data used to store Plug'n'Play (PnP) data was not used for system configuration in POST.
NVRAM Bad	The NVRAM data used to store Plug'n'Play (PnP) data was not used for system configuration in POST due to a data error.
Static Resource Conflict	Two or more Static Devices are trying to use the same resource space (usually Memory or I/O).
PCI I/O conflict	A PCI adapter generated an I/O resource conflict when configured by BIOS POST.
PCI ROM conflict	A PCI adapter generated an I/O resource conflict when configured by BIOS POST.
PCI IRQ conflict	A PCI adapter generated an I/O resource conflict when configured by BIOS POST.
PCI IRQ routing table error	BIOS POST (DIM code) found a PCI device in the system but was unable to figure out how to route an IRQ to the device. Usually this error is causing by an incomplete description of the PCI Interrupt Routing of the system.
Timer Error	Indicates an error while programming the count register of channel 2 of the 8254 timer. This may indicate a problem with system hardware.
Refresh timer test failed	BIOS POST found that the refresh timer hardware failed to pass the Refresh Retrace Test.
Interrupt Controller-1 error	BIOS POST could not initialize the Master Interrupt Controller. This may indicate a problem with system hardware.
Interrupt Controller-2 error	BIOS POST could not initialize the Slave Interrupt Controller. This may indicate a problem with system hardware.

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CMOS

Message Displayed	Description
CMOS Date/Time Not Set	The CMOS date and/or time are invalid. This error can be resolved by readjusting the system time in AMIBIOS Setup.
CMOS Battery Low	CMOS battery is low. This message usually indicates that the CMOS battery needs to be replaced. It could also appear when the user intentionally discharges the CMOS battery.
CMOS Settings Wrong	CMOS settings are invalid. This error can be resolved by using AMIBIOS Setup.
CMOS Checksum Bad	CMOS contents failed the Checksum check. Indicates that the CMOS data has been changed by a program other than the BIOS or that the CMOS is not retaining its data due to malfunction. This error can typically be resolved by using AMIBIOS Setup.

Miscellaneous

Message Displayed	Description
KBC BAT Test failed	Keyboard controller BAT test failed. This may indicate a problem with keyboard controller initialization.
Keyboard Error	Keyboard is not present or the hardware is not responding when the keyboard controller is initialized.
PS/2 Keyboard not found	PS/2 keyboard support is enabled in the BIOS setup but the device is not detected.
PS/2 Mouse not found	PS/2 mouse support is enabled in the BIOS setup but the device is not detected.
Keyboard/Interface Error	Keyboard controller failure. This may indicate a problem with system hardware.
Unlock Keyboard	PS/2 keyboard is locked. User needs to unlock the keyboard to continue the BIOS POST.
System Halted	The system has been halted. A reset or power cycle is required to reboot the machine. This message appears after a fatal error has been detected.
<INS> Pressed	Indicates that <INS> key is pressed during the BIOS POST. The POST will load and use default CMOS settings.
Password check failed	The password entered does not match the password set in the setup. This condition may occur for both Supervisor and User password verification.
Unknown BIOS error Error code = 004Ah	This message is displayed when ADM module is not present in the AMIBIOS8 ROM.
Unknown BIOS error Error code = 004Bh	This message is displayed when language module is not present in the AMIBIOS8 ROM.
Floppy Controller Failure	Error in initializing legacy Floppy Controller.

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Index of Symptom-to-FRU Error Messages

To use the information in this section to diagnose a problem:

1. Find the error symptom in the left column.
2. If directed to a check procedure, replace the FRU indicated in the check procedure.

   If no check procedure is indicated, the first Action/FRU item listed in the right column is the most likely cause.

NOTE If you cannot find a symptom or an error in this list and the problem remains, see "Undetermined Problems" on page 65.

Processor/Processor Fan-related Symptoms

Symptom/Error	Action/FRU
Processor fan does not run but power supply fan runs.	• Ensure the system is not in power saving mode. • With the system powered on, measure the voltage of the processor fan connector. Its reading should be +12Vdc. If the reading shows normal, but the fan still does not work, then replace the heat sink fan. • Mainboard
Processor test failed.	• Processor • Mainboard

NOTE Normally, the processor fan should be operative, and the processor clock setting should be exactly set to match its speed requirement before diagnosing any processor problems.

Mainboard and Memory-related Symptoms

Symptom/Error	Action/FRU
Memory test failed.	• Memory module • Mainboard
Incorrect memory size shown or repeated during POST.	• Insert the memory modules in the DIMM sockets properly, then reboot the system. • Memory module • Mainboard
System works but fails to enter power saving mode when the Power Management Mode is set to Enabled.	• Enter CMOS Setup and load the default settings. In Windows systems, check settings in Power Management Property of the Control Panel. • Reload software from Recovery CD.
Blinking cursor only, system does not work.	• IDE drive connection/cables • IDE disk drives • See "Undetermined Problems" • Mainboard

NOTE Ensure the memory modules are installed properly and the contact leads are clean before diagnosing any system problems.

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Hard Disk Drive-related Symptoms

Symptom/Error	Action/FRU
Hard disk drive test failed	• Enter CMOS Setup and load the default settings • Hard disk drive cable • Hard disk drive • Mainboard
Hard disk drive cannot format completely	• Enter CMOS Setup and load the default settings • Hard disk drive cable • Hard disk drive • Mainboard
Hard disk drive has write error	• Enter CMOS Setup and load the default settings • Hard disk drive
Hard disk drive LED fails to light, but system operates normally	• With the system power on, measure the voltage of the HDD LED connector • HDD LED cable

NOTE Make sure the hard disk drive is configured correctly in CMOS Setup and that cable/jumper are set correctly before diagnosing any hard disk drive problems. (If only one drive is installed, please make sure the drive is connected to master connector or the drive is set to master.)

Optical Disc Drive-related Symptoms

Symptom/Error	Action/FRU
CD/DVD-ROM drive LED doesn't come on but works normally	• Enter CMOS Setup and load the default settings • DIMM • Mainboard
CD/DVD-ROM drive LED flashes for more than 30 seconds before LED shutting off Software asks to reinstall disc. Software displays a reading CD/DVD error.	• CD/DVD-ROM may have dirt or foreign material on it. Check with a known good disc • CD/DVD-ROM is not inserted properly • CD/DVD-ROM is damaged
CD/DVD-ROM drive cannot load or eject when the system is turned on and its eject button is pressed and held	• Disconnect all cables from CD/DVD-ROM drive except power cable, then press the eject button to try to unload the disc • CD/DVD-ROM drive power cable • CD/DVD-ROM drive
CD/DVD-ROM drive does not read and there are no messages are displayed	• CD may have dirt or foreign material on it. Check with a known good disc • Ensure the CD/DVD-ROM driver is installed properly • CD/DVD-ROM drive
CD/DVD-ROM drive can play audio CD but no sound output	• Ensure the headphone jack of the CD/DVD-ROM has an output • Turn up the sound volume • Speaker power/connection/cable • CD/DVD-ROM drive

NOTE Make sure the optical disc drive is configured correctly in CMOS Setup, the cable/jumper are set correctly and the drive's optical lens is clean before diagnosing any optical drive problems.

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Real-Time Clock-related Symptoms

Symptom/Error	Action/FRU
Real-time clock is inaccurate	• Ensure the information in the Standard CMOS Feature of BIOS Setup is set correctly • RTC battery • Mainboard

Audio-related Symptoms

Symptom/Error	Action/FRU
Audio software program invoked but no sound comes from speakers	• Speaker power/connection/cable

Modem-related Symptoms

Symptom/Error	Action/FRU
Modem ring cannot wake up system from suspend mode	• For an external modem, make sure Power on By Ring in BIOS Setup or Power Management is set to Enabled. For the PCI modem, make sure Wake up by PCI card is set to Enabled. • If a PCI modem card is used, reinsert the modem card to the PCI slot firmly or replace the modem card. • In Win 98, ensure the telephone application is configured correctly for your modem and set to receive messages and/or fax.
Data/fax modem software program invoked but cannot receive/send data/fax	• Ensure the modem card is installed properly
Fax/voice modem software program invoked but has no sound output. (Data files are received normally, voice from modem cannot be produced, but system sound feature works normally.)	• Ensure the modem voice-in cable from modem adapter card is connected to the mainboard

Video and Monitor-related Symptoms

Symptom/Error	Action/FRU
Video memory test failed Video adapter failed	• Remove all non-factory-installed cards • Load default settings (if screen is readable) • Mainboard
Display problem • Incorrect colors • No high intensity • Missing, broken, or incorrect characters • Blank monitor (dark) • Blank monitor (bright) • Distorted image • Unreadable monitor	• Monitor signal connection/cable • Monitor • Video adapter card • Mainboard
Display changing colors	• Monitor signal connection/cable • Video adapter card • Mainboard

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Printer-related Symptoms

Symptom/Error	Action/FRU
Printing failed	• Ensure the printer driver is properly installed. Refer to the printer service manual. • Printer • Printer cable • Mainboard
Printer problems	• Refer to the service manual for the printer.

Keyboard-related Symptoms

Symptom/Error	Action/FRU
Some or all keys on keyboard do not work.	• Keyboard

Power Supply-related Symptoms

Symptom/Error	Action/FRU
Pressing the power button does not turn off the system. (Only unplugging the power cord from electrical outlet can turn off the system.)	• Ensure the Soft-off by PWR-BTTN in CMOS Setup (under Power Management) is not set to Instant-off. • Power switch cable assembly
Pressing the power button does not turn on the system.	• Ensure the power override switch (located at the back of the computer, just above the connector for the power cable) is not set to OFF. • Power switch cable assembly.
Executing software shutdown from Windows98 Start menu does not turn off the system. (Only pressing power button can turn off the system)	• Enter CMOS Setup and load the default settings. • Reload software from Recovery CD.
No system power, or power supply fan is not running.	• Power supply • Mainboard

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Beep Codes

When no error message is displayed but the computer stops during POST, listen for beep codes

Beep	Status	Possible Causes
One short beep	System ready	System is OK
Continuous one long beep	Memory not installed or memory error	• Something is wrong with the memory installed • There is problem accessing the memory (i e , mainboard problem)
One long beep, then two short beeps and repeat	VGA not installed or VGA error	• The mainboard can not access the video card for some reasons Either the video card is not working, its memory is not accessible, or its BIOS may be corrupt • Something is wrong with the mainboard
One long beep, then one short beep	BIOS failure	BIOS damaged Processor jump to boot block to execute the default procedure
Two short beeps	CMOS failure	CMOS checksum error

Undetermined Problems

NOTE
- Verify that all attached devices are supported by the computer
- Verify that the power supply being used at the time of the failure is operating correctly (See "Power System Check" on page 45)

Follow the procedures below to isolate the failing FRU Do not isolate non-defective FRU

1. Power off the computer
2. Visually check them for damage If any problems are found, replace the FRU
3. Remove or disconnect all of the following devices
   - Non-Acer devices
   - Printer, mouse, and other external devices
   - Hard disk drive
   - DIMM
   - CD/DVD-ROM drive
   - Expansion boards
4. Power on the computer
5. Determine if the problem has been resolved
6. If the problem does not recur, reconnect the removed devices one at a time until you find the failed FRU

   If the problem persists, replace the mainboard, and then LCD assembly (one at a time) Do not replace a non-defective FRU

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BIOS Recovery

When you boot up the computer and you hear one long beep, followed by a shorter one, the system BIOS is damaged. This maybe cause by an interruption during a BIOS flash procedure (e.g. a power outage) or a corrupted BIOS code, which will cause the system to go into an unbootable state. You need to access and execute the boot block program to reboot the computer and recover the regular BIOS code.

Note the following when restoring the BIOS settings:

- Make sure the computer is connected to a UPS unit during the BIOS recovery process.
- The BIOS crisis recovery disk should be prepared in a computer running the Windows XP or Windows Vista OS.

Creating the BIOS Crisis Recovery Disk

1. Prepare a removable USB storage device with a capacity size greater than 10 MB.

   Note that all data on the USB storage device will be cleared during the creation of the crisis disk.
2. Set up a computer running the Windows XP or Windows Vista operating system and plug in the USB storage device into an available USB port.
3. Copy the target BIOS ROM file to the USB storage device and rename it as "amiboot.rom".
4. Unplug the USB storage device.
5. Eject the removable USB storage device from the computer.

Performing a BIOS Recovery

1. Shut down the BIOS failed-computer.
2. Connect the USB storage device containing the "amiboot.rom" file to the failed computer.
3. Press the power button to turn on the computer.

   The system will now execute the BIOS recovery process. When the process is complete, four short beeps will be emitted and the computer will automatically reboot.
4. Disconnect the USB storage device from the computer.
5. Press **Delete** to run the CMOS Setup Utility.
6. Press **F9** to load the system default settings.
7. Select **Ok**, then press **Enter**.
8. Press **F9** to save the default settings and close the Setup utility.
9. Select **Ok**, then press **Enter**.

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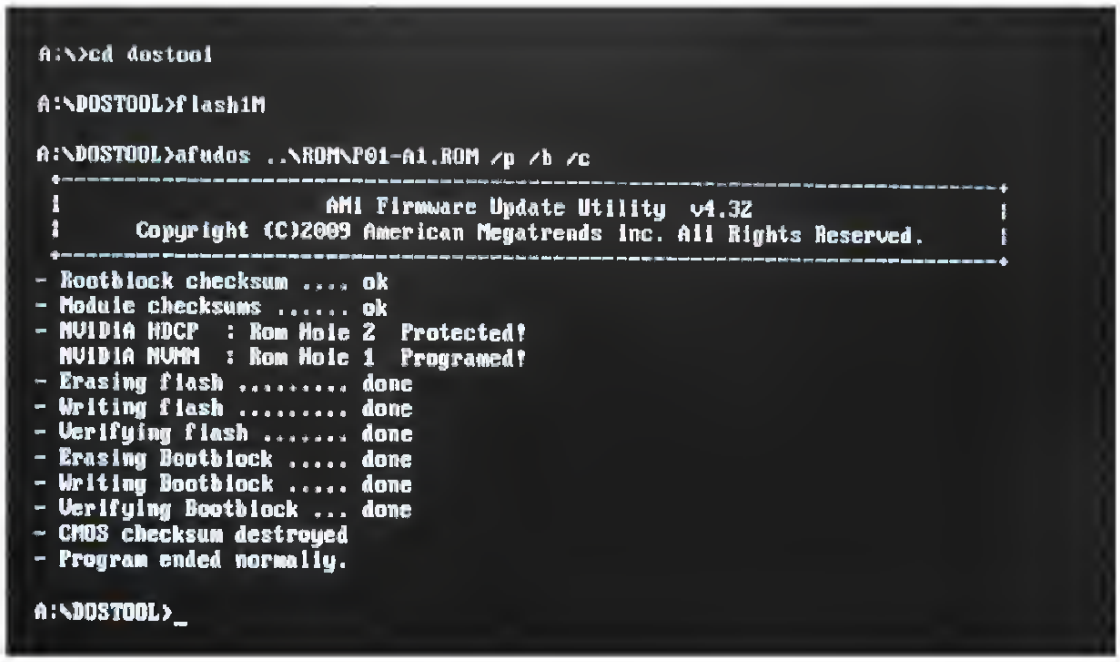
BIOS Update

Updating the BIOS in DOS Mode

1. Press the power button to turn on the computer and boot to DOS mode.
2. Key in 'cd dostool' (Go to BIOS path like "A:\DOSTOOL")
3. Key in 'flash1M bat' or 'flash1M'

4. Press **Enter** to flash the system BIOS.


A:\>cd dostool
A:\DOSTOOL>flash1M
A:\DOSTOOL>afudos ..\ROM\P01-A1.ROM /p /b /c
AMI Firmware Update Utility v4.32
Copyright (C)2009 American Megatrends Inc. All Rights Reserved.
- Rootblock checksum .... ok
- Module checksums ..... ok
- NVIDIA HDCP : Rom Hole 2 Protected!
NVIDIA NVMM : Rom Hole 1 Programed!
- Erasing flash ..... done
- Writing flash ..... done
- Verifying flash ..... done
- Erasing Bootblock ..... done
- Writing Bootblock ..... done
- Verifying Bootblock ... done
- CMOS checksum destroyed
- Program ended normally.
A:\DOSTOOL>_

5. Reboot the computer.
6. Press **Delete** to run the CMOS Setup Utility.
7. Press **F9** to load the system default settings.
8. Select **Ok**, then press **Enter**.
9. Press **F9** to save the default settings and close the Setup utility.
10. Select **Ok**, then press **Enter**.

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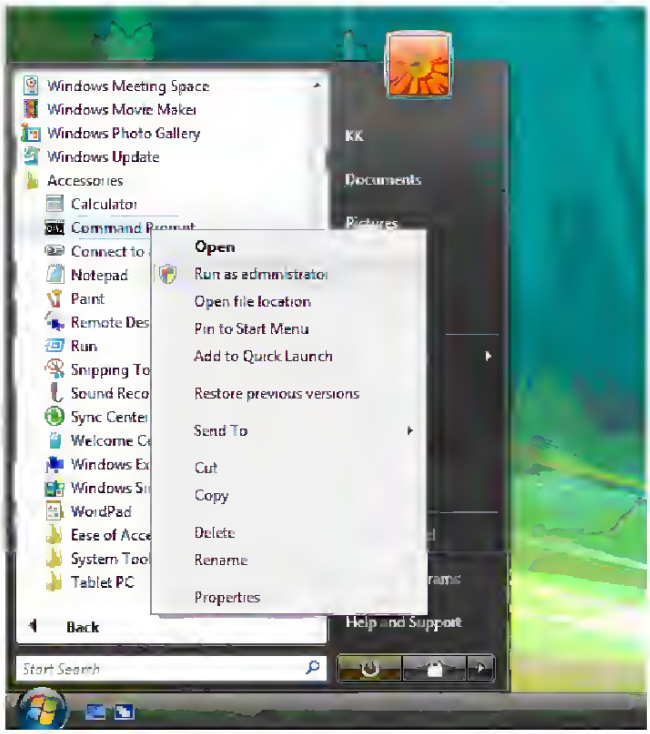
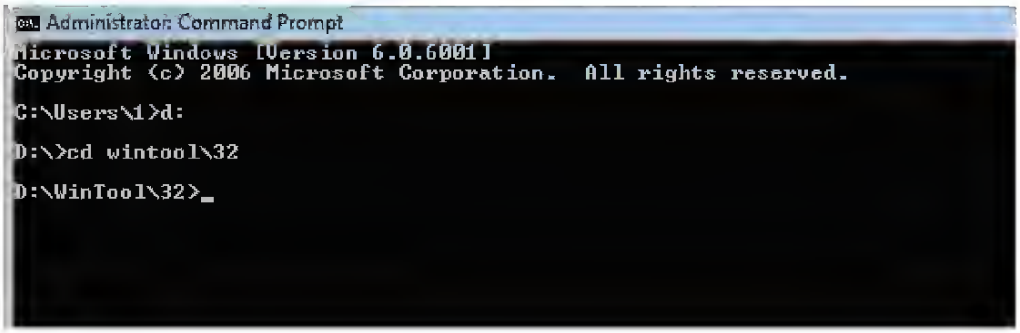
Updating the BIOS in Windows Mode

This BIOS updating procedure is for a computer running a 32- or 64-bit Windows OS

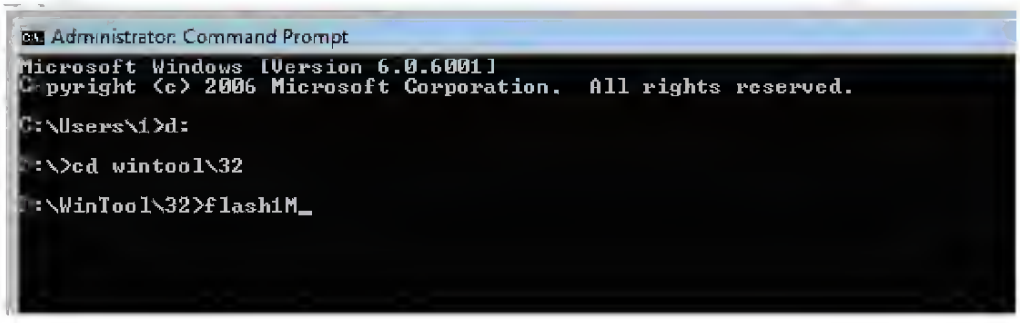
1. Press the power button to turn on the computer
2. Click **Start** | **Command Prompt** | **Run as administrator**



3. Perform the steps below if your computer is running 32-bit Windows
   a. Key in 'cd wintool\32'. (Go to BIOS path like "D:\WinTool\32")



   b. Key in 'flash1M bat' or 'flash1M'



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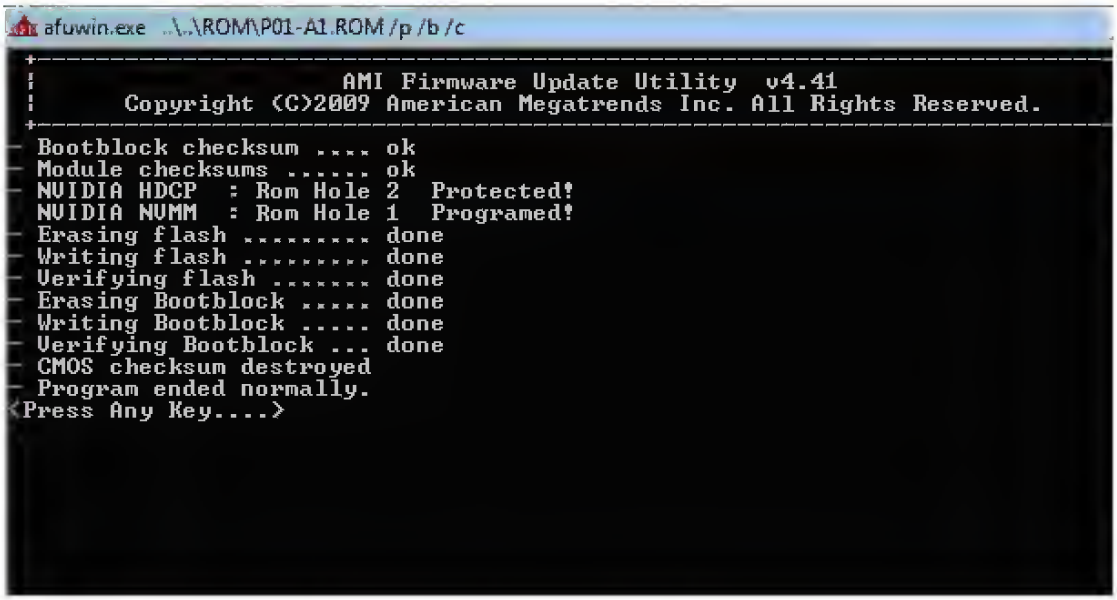
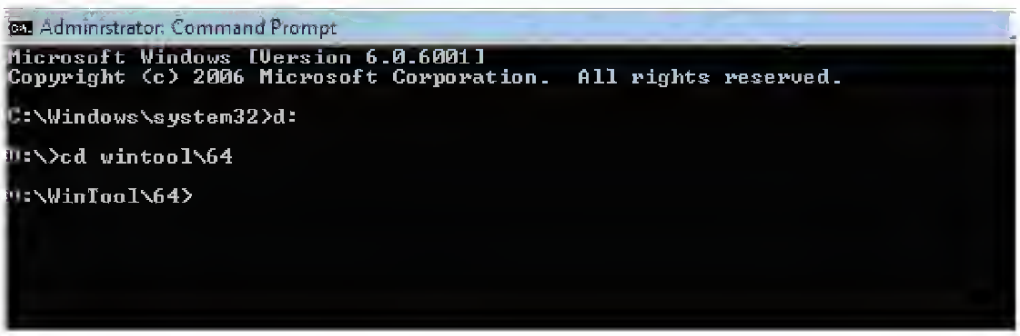
c. Press **Enter** to flash the system BIOS.

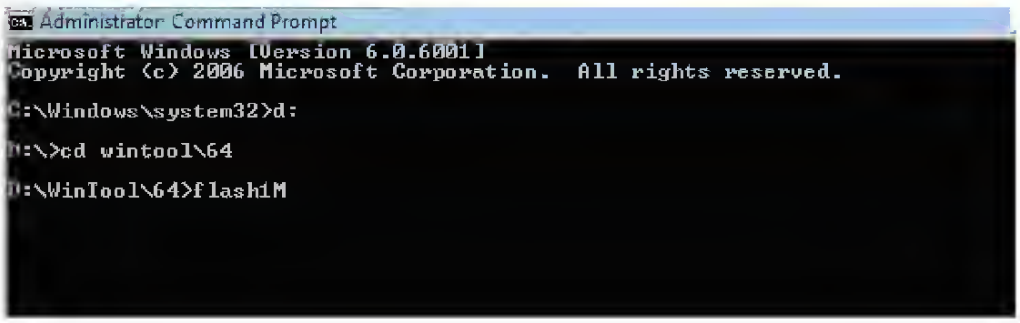

afuwin.exe ..\..\ROM\P01-A1.ROM /p /b /c
AMI Firmware Update Utility v4.41
Copyright (C)2009 American Megatrends Inc. All Rights Reserved.
Bootblock checksum .... ok
Module checksums ..... ok
NVIDIA HDCP : Rom Hole 2 Protected!
NVIDIA NVMM : Rom Hole 1 Programed!
Erasing flash ..... done
Writing flash ..... done
Verifying flash ..... done
Erasing Bootblock ..... done
Writing Bootblock ..... done
Verifying Bootblock ... done
CMOS checksum destroyed
Program ended normally.
<Press Any Key....>

4. Perform the steps below if your computer is running 64-bit Windows.

   a. Key in 'cd wintool\64' (Go to BIOS path like "D:\WinTool\64")



   b. Key in 'flash1M.bat' or 'flash1M'.



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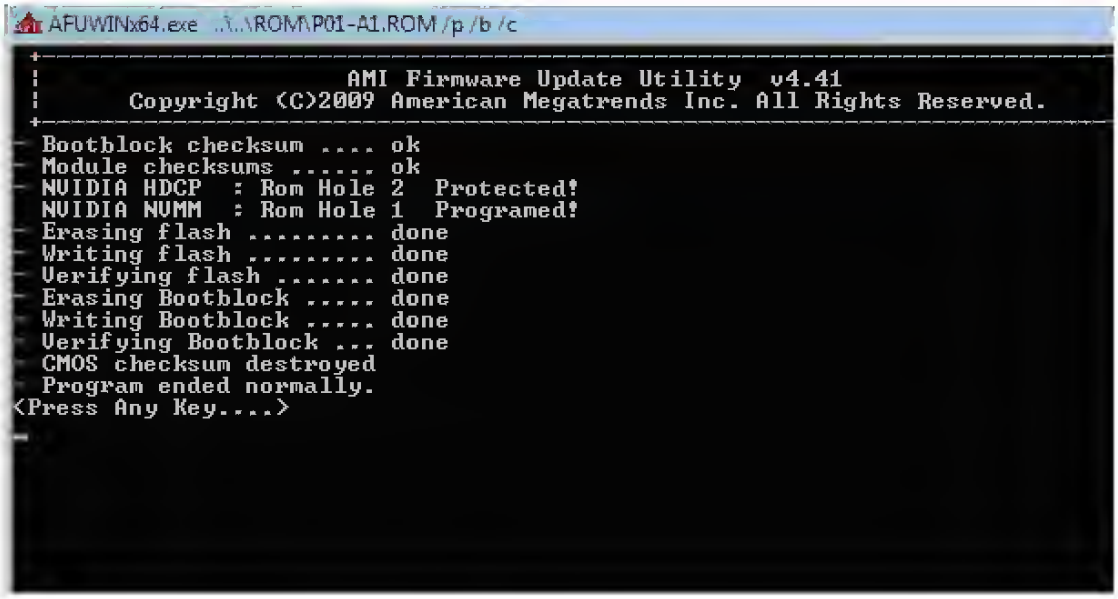
c. Press **Enter** to flash the system BIOS.


AFUWINx64.exe ..\..\ROM\P01-A1.ROM /p /b /c
AMI Firmware Update Utility v4.41
Copyright (C)2009 American Megatrends Inc. All Rights Reserved.
Bootblock checksum .... ok
Module checksums ..... ok
NVIDIA HDCP : Rom Hole 2 Protected!
NVIDIA NVMM : Rom Hole 1 Programed!
Erasing flash ..... done
Writing flash ..... done
Verifying flash ..... done
Erasing Bootblock ..... done
Writing Bootblock ..... done
Verifying Bootblock ... done
CMOS checksum destroyed
Program ended normally.
<Press Any Key....>

5. Reboot the computer.
6. Press **Delete** to run the CMOS Setup Utility.
7. Press **F9** to load the system default settings.
8. Select **Ok**, then press **Enter**.
9. Press **F9** to save the default settings and close the Setup utility.
10. Select **Ok**, then press **Enter**.

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Clearing CMOS

You may need to clear the Setup configuration values (CMOS) if the configuration has been corrupted, or if incorrect settings made in the Setup Utility caused error messages to be unreadable. This procedure will clear the BIOS supervisor password as well.

Use the JBIOS1 jumper to clear the CMOS data

- 1-2 position: Normal operation (default)
- 2-3 position: Clear CMOS data

To clear the CMOS data:

1. Turn off the power to the computer and all peripherals.
2. Unplug the power cord from the computer.
3. Unplug the network cable and all connected peripheral devices from the computer.
4. Place the computer on a flat, steady surface.
5. Remove the side panel.
6. If necessary, remove any expansion cards, assemblies or cables that prevent access to the CMOS clear jumper.
7. Locate the JBIOS1 jumper on the mainboard.
8. Remove the jumper block and set it over the 2-3 pins for 20 to 30 seconds.
9. Return the jumper block to its default 1-2 position.
10. Reinstall any expansion card, peripheral, and system cables that have previously been removed.
11. Reinstall the side panel.
12. Connect the AC power cord to the system.
13. Press the power button ⏻ to turn on the computer.
14. During POST, press **Delete** to access the Setup Utility.
15. Press **F9** to load the system default values.
16. Press **F10** to save the changes you made and close the Setup Utility.

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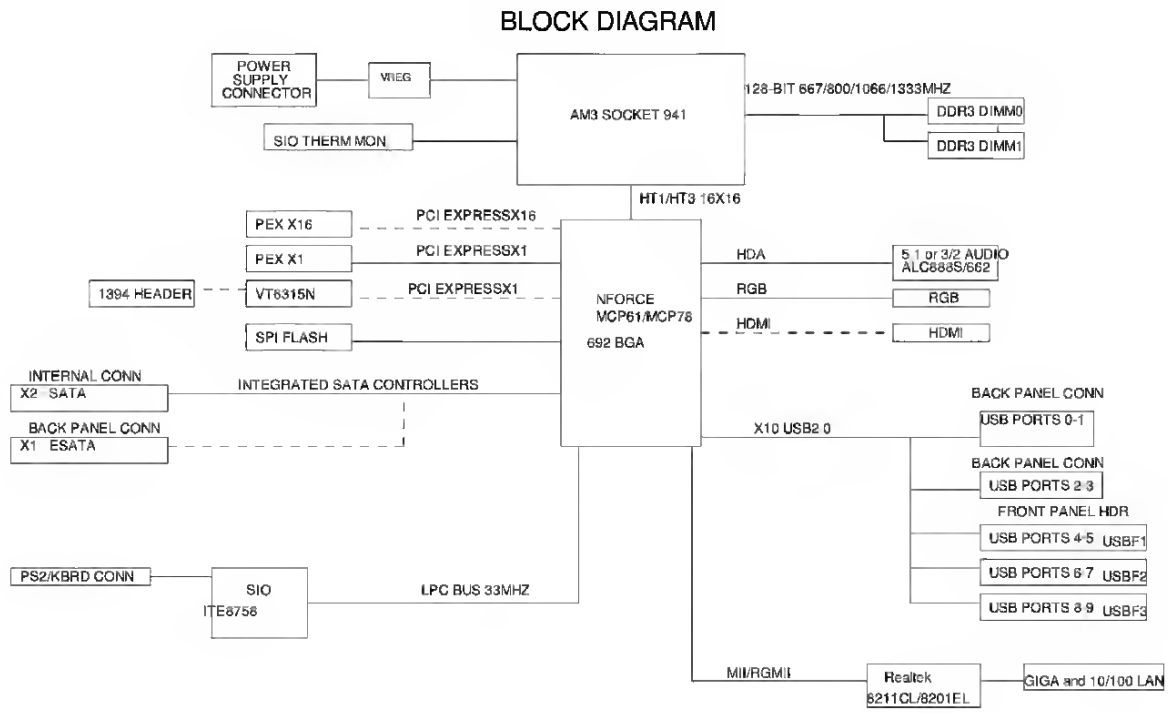
Chapter 5

System Architecture

This chapter shows the block diagram and board layout of the Aspire AX1400 computer.

Block Diagram

The core subsystems of the Aspire AX1400 computer are depicted in the following block diagram.



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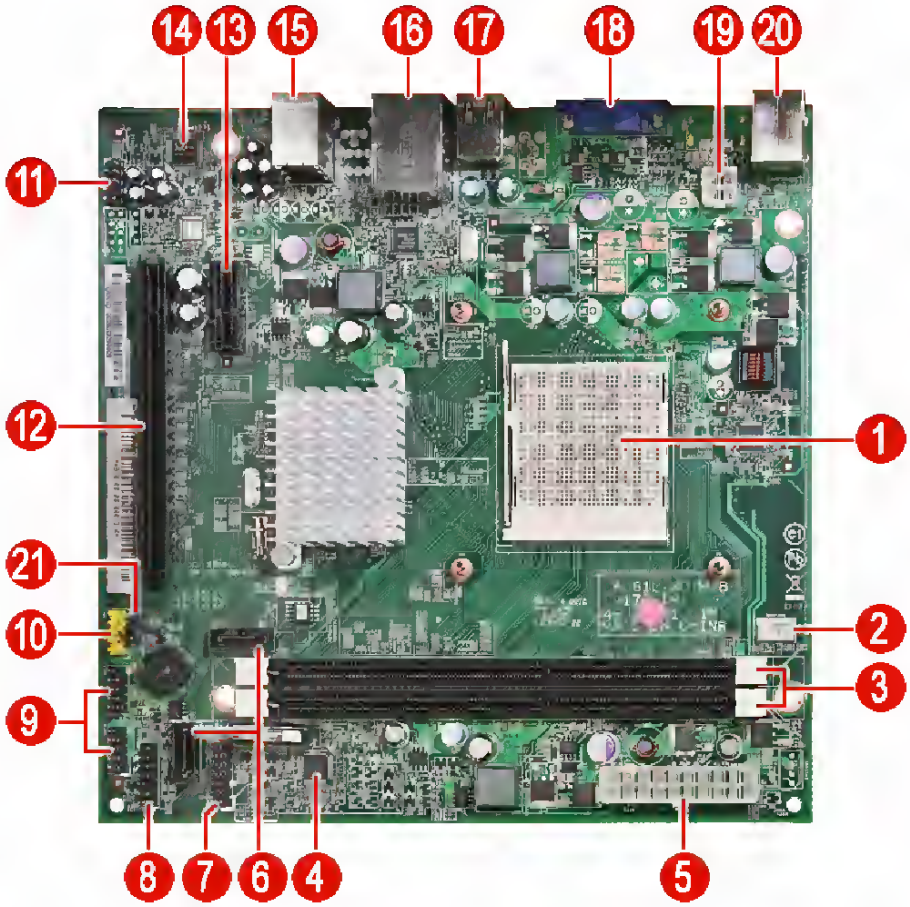
Mainboard Layout

This section shows the major mainboard components



No.	Label	Description	No.	Label	Description
1	U1	CPU socket	12	PCIEX16	PCIEX16 Slot
2	CPUFAN1	CPU cooling fan connector	13	PCIEX1	PCIEX1 36-pin slot
3	DIMM1-2	DDR3 240-pin slots	14	U2	ALC662
4	U23	ITE B75B	15	AUDJACK2	Line in/Line Out/MIC
5	PWR2	Standard 24-pin power connector	16	USBLAN1	RJ45+USB connector
6	SATA1-2	Serial ATA connectors	17	USBR1	USB-A BP connector
7	DEBUGH1	12-pin DEBUG port	1B	VGA1	VGA connector
B	LEDH1	12-pin power cable header	19	PWR1	ATX 4-pin connector
9	USBF 2-3	Front panel USB header	20	KBMSCONN1	Keyboard and mouse connectors
10	USBF 1	Front panel card reader header	21	JBIOS1	Clear CMOS jumper
11	AUDIOF1	Front panel audio jack header			

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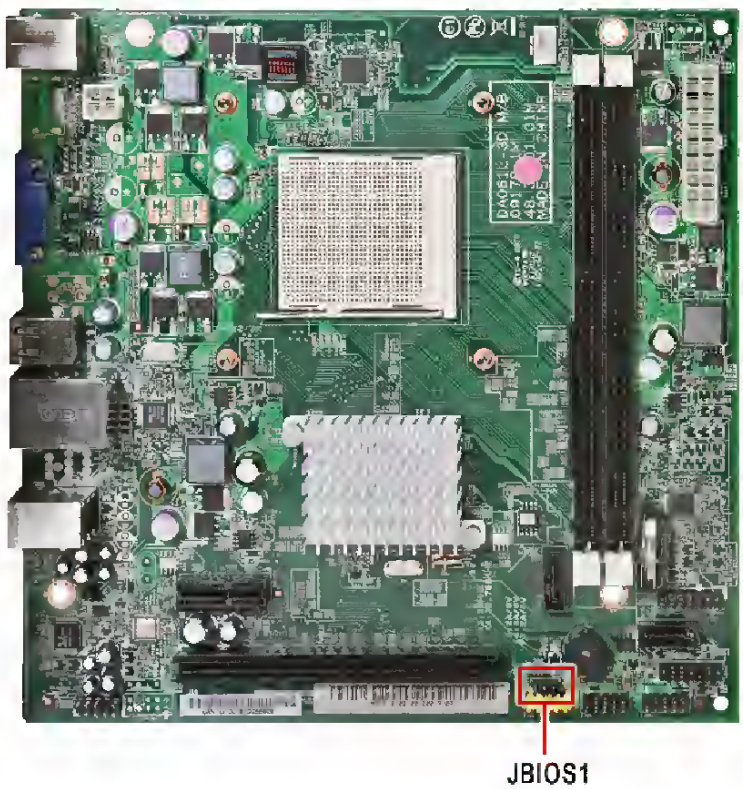
Jumper Setting

This section explains how to set the jumper for correct configuration of the main board.

Jumpers with more than one pin are numbered. When setting a jumper, ensure that the jumper caps are placed on the correct pins.

The following illustration shows the location of JBIOS1.



The following table shows the settings of the 3-pin Clear CMOS (JBIOS1) jumper. Place the jumper cap on pins 1 and 2 to close or short the jumper. Place the jumper cap on pins 2 and 3 to open or clear the jumper.

Jumper	Type	Description	Setting (default)	
JBIOS1	3-pin	Clear CMOS	1-2 Close (default) 2-3 Open Before clearing the CMOS, make sure to turn off the system	1

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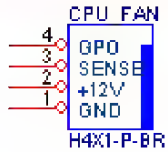
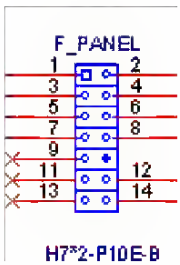
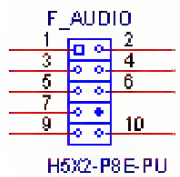
Internal header pin definition

Header Name	Function	Definition
	CPU FAN HEADER	1 GND 2 +12V 3 SENSE 4 PWM CONTROL
	FRONT PANEL HEADER	1 SATALED+ 2 ACPI_LED 3 SATALED- 4 PWR_LED 5 GND 6 PWR_SW 7 RESET 8 GND 9 NC 10 Key 11 NC 12 VCC 13 NC 14 -ACTIVE_C
	FRONT USB HEADER	1 USBVCC_1 2 USBVCC_1 3 USB0_XN 4 USB1_XN 5 USB0_XP 6 USB1_XP 7 GND 8 GND 9 KEY 10 GND
	FRONT USB HEADER	1 USBVCC_2 2 USBVCC_2 3 USB2_XN 4 USB4_XN 5 USB2_XP 6 USB4_XP 7 GND 8 GND 9 KEY 10 GND
	FRONT AUDIO HEADER	1 PORT-F_L 2 AUGND 3 PORT-F_R 4 FRONT_AUD_DET 5 PORT-E_R 6 MIC2_JD 7 AUGND 8 KEY 9 PORT-E_L 10 LINE2_JD

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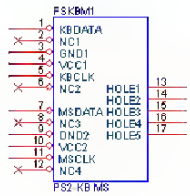
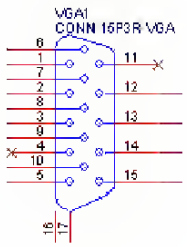
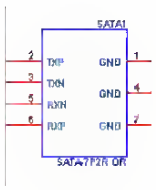
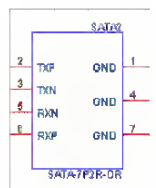
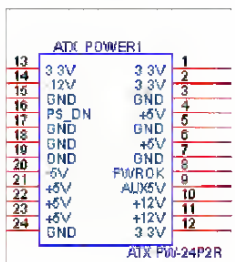
Connector pin definition

Header Name	Function	Definition
	PSKBMS CONN	1 KBDATA 2 NC 3 GND 4 KBVCCSB 5 KBCLK 6 NC 7 MSDATA 8 NC 9 GND 10 KBVCCSB 11 MSCLK 12 NC 13 GND 14 GND 15 GND 16 GND 17 GND
	VGA CONN	1 RED 2 GREEN 3 BLUE 4,11 NC 9 HDMIVCC 12 VDAC_SDAT 13 HSYNC 14 VSYNC 15 VDAC_SCLK 5,6,7,8,10,16,17 GND
	SATA CONN	1 GND 2 SATA0_TX_P 3 SATA0_TX_N 4 GND 5 SATA0_RX_N 6 SATA0_RX_P 7 GND
	SATA CONN	1 GND 2 SATA1_TX_P 3 SATA1_TX_N 4 GND 5 SATA1_RX_N 6 SATA1_RX_P 7 GND
	ATX_POWER CONN	1 VCC3 13 VCC3 2 VCC3 14 -12V 3 GND 15 GND 4 VCC 16 ATX_PSON_L 5 GND 17 GND 6 VCC 18 GND 7 GND 19 GND 8 ATX_PWRGD 20 NC 9 5VSB 21VCC 10 +12V 22 VCC 11 +12V 23 VCC 12 VCC3 24 GND

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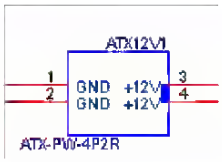
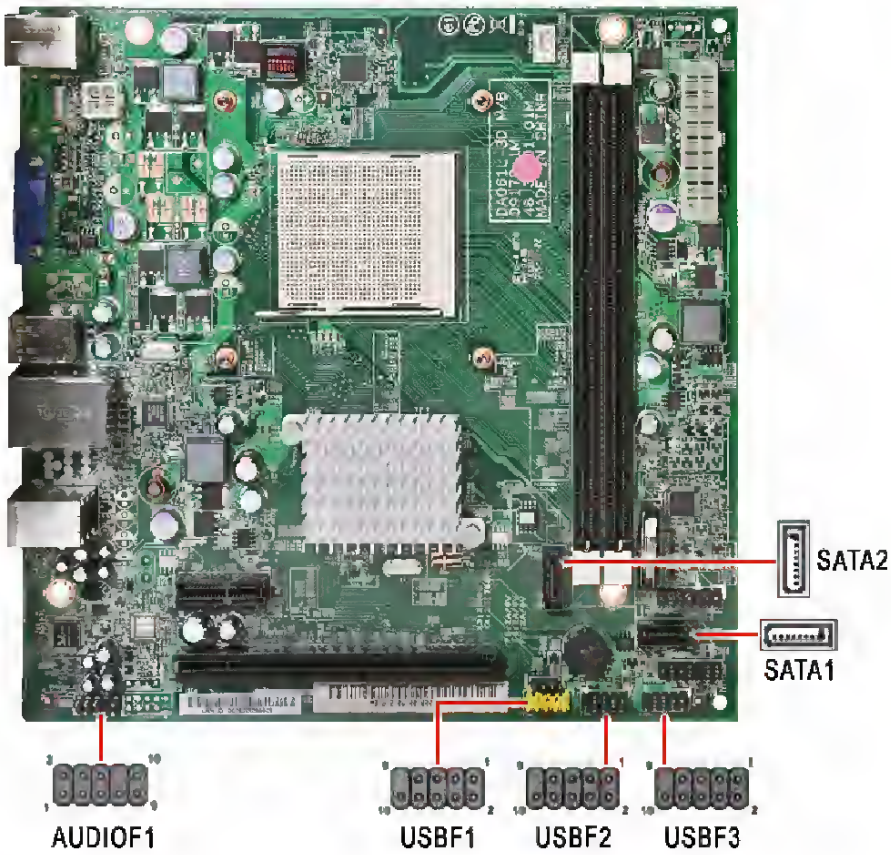
Header Name	Function	Definition
	ATX12V CONN	1 GND 2 GND 3 +12V_4P 4 +12V_4P

Connecting Optional Devices

Refer to the following for information on connecting the main board's optional devices.



SATA1~2: Serial ATA connectors

These connectors are used to support the new Serial ATA devices for the highest datatransfer rates (3.0 Gb/s), simpler disk drive cabling and easier PC assembly. It elimi-nates limitations of the current Parallel ATA interface. But maintains register com-patibility and software compatibility with Parallel ATA

Pin	Signal Name	Pin	Signal Name
1	Ground	2	TX+
3	TX-	4	Ground
5	RX-	6	RX+
7	Ground		

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AUDIOF1: Front Panel Audio header

This header allows the user to install auxiliary front-oriented microphone and line-out ports for easier access.

Pin	Signal Name	Pin	Signal Name
1	PORT 1L	2	AUD_GND
3	PORT 1R	4	PRESENCE#
5	PORT 2R	6	SENSE1_RETURN
7	SENSE_SEND	8	KEY
9	PORT 2L	10	SENSE2_RETURN

USBF1~3: Front Panel USB headers

The motherboard has two USB ports installed on the rear edge I/O port array Additionally, some computer cases have USB ports at the front of the case. If youhave this kind of case, use auxiliary USB connector to connect the front-mountedports to the motherboard.

Pin	Signal Name	Function
1	USBPWR	Front Panel USB Power
2	USBPWR	Front Panel USB Power
3	USB_FP_P0-	USB Port 0 Negative Signal
4	USB_FP_P1-	USB Port 1 Negative Signal
5	USB_FP_P0+	USB Port 0 Positive Signal
6	USB_FP_P1+	USB Port 1 Positive Signal
7	GND	Ground
8	GND	Ground
9	Key	No pin
10	USB_FP_OC0	Overcurrent signal

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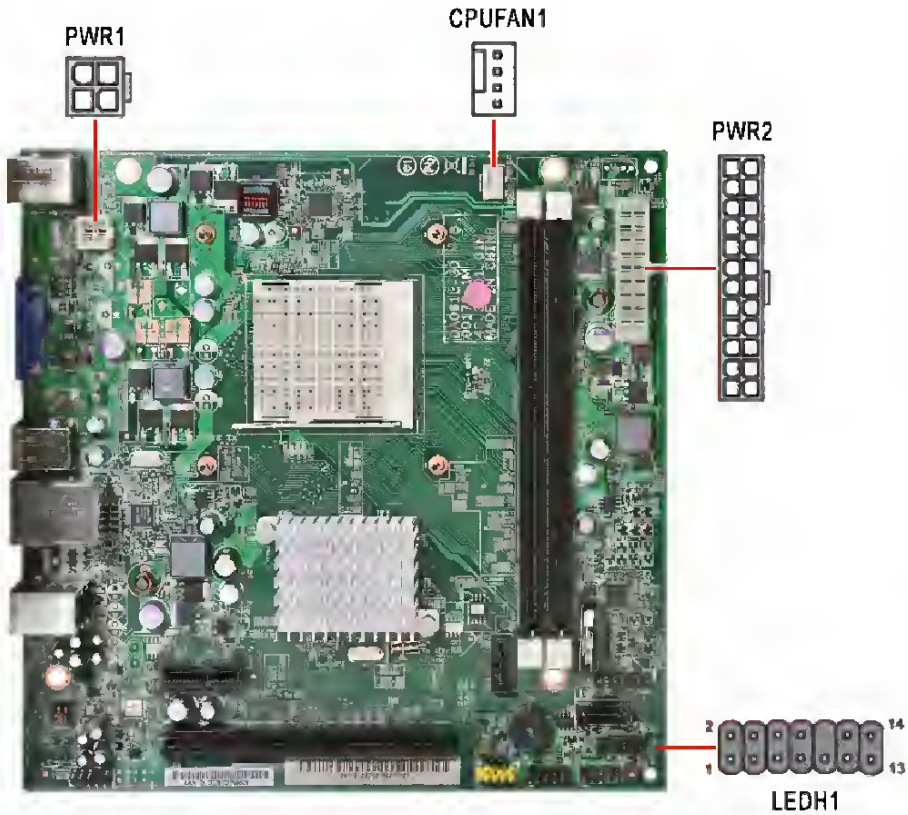
Connecting Case Components

After you have installed the motherboard into a case, you can begin connecting themotherboard components. Refer to the following:

1. Connect the CPU cooling fan cable to CPUFAN1.
2. Connect the standard power supply connector to PWR2.
3. Connect the case switches and indicator LEDs to the LEDH1.
4. Connect the auxiliary case power supply connector to PWR1.



CPUFAN1: CPU Cooling Fan Power Connector

Pin	Signal Name	Function
1	GND	System ground
2	+12V	Power +12V
3	Sense	Sensor
4	PWM	PWM

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PWR2: ATX 24-pin Power Connector

Pin	Signal Name	Pin	Signal Name
1	+3.3V	13	+3.3V
2	+3.3V	14	-12V
3	Ground	15	Ground
4	+5V	16	PS_ON
5	Ground	17	Ground
6	+5V	18	Ground
7	Ground	19	Ground
8	PWRGD	20	-5V
9	+5VSB	21	+5V
10	+12V	22	+5V
11	+12V	23	+5V
12	+3.3V	24	Ground

PWR1: ATX 12V Power Connector

Pin	Signal Name
1	Ground
2	Ground
3	+12V
4	+12V

Front Panel Header

The front panel header (LEDH1) provides a standard set of switch and LED headers commonly found on ATX or micro-ATX cases. Refer to the table below for information:

Pin	Signal Name	Function	Pin	Signal Name	Function
1	VCC	Reset Switch (+)	2	GLED0	*MSG LED (+)
3	HDD_LEDN	Hard disk LED (-)	4	GLED1	*MSG LED (-)
5	GND	Reset Switch (-)	6	PWRSW	Power Switch (+)
7	HWRST_L	Reset Switch (+)	8	GND	Power Switch (-)
9	F_PANEL_DET	Reserved	10	KEY	No pin
11	NC	Reserved	12	VCC	Reset Switch (+)
13	NC	Reserved	14	F_LAN_LED	Reset Switch (+)

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Chapter 6

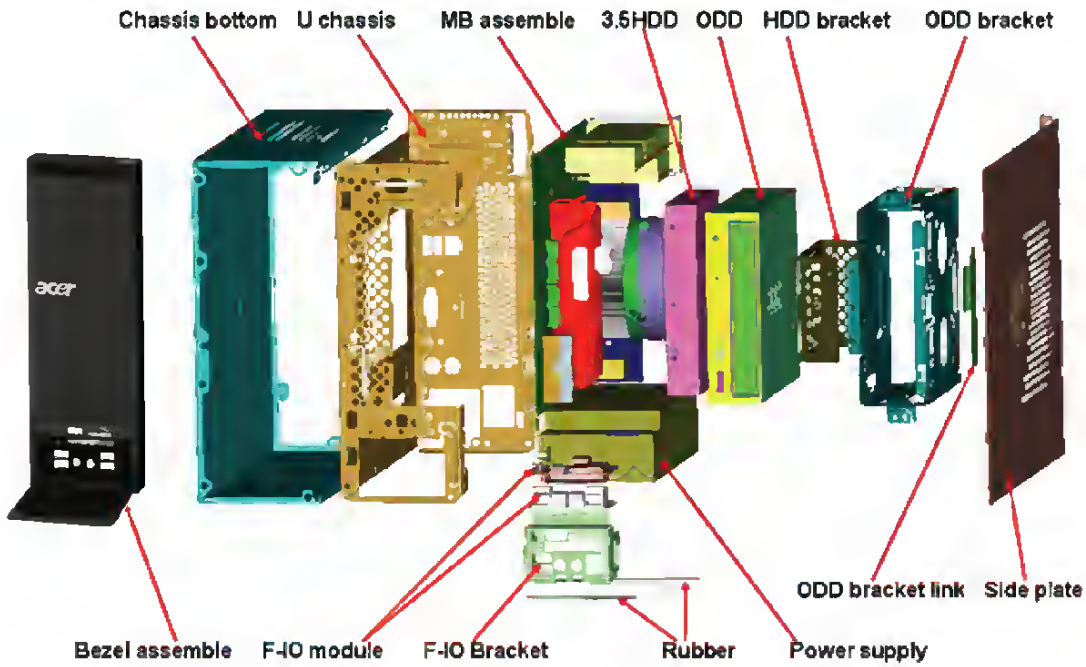
Field Replaceable Unit (FRU) List

This chapter gives you the FRU (Field Replaceable Unit) listing of the Aspire AX1400 computer global configurations. Refer to this list when ordering for repair parts or for RMA (Return Merchandise Authorization).

IMPORTANT When ordering FRU parts, check the most up-to-date information available on your regional web or channel. For whatever reasons a part number is changed, it will NOT be noted on the printed Service Guide. For Acer authorized service providers, your Acer office may have a different part number code from those given in the FRU list of this printed Service Guide. You MUST use the local FRU list provided by your regional Acer office to order FRU parts for service.

NOTE Follow the local government regulations, or the rules set by your regional office on how to return or dispose of defective parts.

Exploded Diagram



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Aspire AX1400 FRU List

ACER_AX1400_AMANALO(NO 91.3BU01.A01G)

Category	Part Name	Description	Acer Part No.
BOARDS	CARD READER 9 IN 1 8.5L AU6476 W/USB2.0 & USB CABLE W/O 1394	CR 9-IN-1 ALCOR AU6476, 420MM USB CABLE	CR.10400.102
	CARD READER 9 IN 1 8.5L AU6475 W/USB2.0 & USB CABLE W/O 1394	CR 9-IN-1 RI727 ALCOR AU6475, 420MM USB	CR.10400.107
	FRONT IO BOARD CENTURY W/AUDIO CABLE*1&USB CABLE*2	F-IO BOARD/2AUDIO JACK+2USB CO	55.SC101.001
	MODEM CARD LITE-ON D-1156E#A10A LOW-PROFILE PCI-E 56K V.92	MODEM 56K ATX LSI UNIVERSAL (P	FX.10100.003
	MODEM CARD 56K PRO-NETS PRONETS VD56UL EXTERNAL USB REV 1.0	MODEM PRO-NETS VD56UL EXTERNAL	FX.10100.023
	WIRELESS LAN BOARD 802.11BGN LITEON WN7600R	WLAN 802.11BGN RALINK MC 1*2	NI.10200.009
	WIRELESS LAN BOARD 802.11BGN PRONETS WU71RL USB	WLAN 802.11 BGN WU71RL USB	NI.10200.023
	WIRELESS LAN BOARD 802.11BGN 1X1 RALINK RT3090 LOW-PROFILE	WLAN 802.11BGN 1X1 RALINK RT3090 (LOW-PR	NI.10200.038
	VGA CARD PCPARTNER 288-1N141-A00AC NVIDIA GT315 512MB SDDR3 DVI+HDMI ATX (SAMSUNG)	PCP NV GT315 512MB SDDR3 SDI	VG.PCPT3.153
	VGA CARD PCPARTNER 288-1E145-A01AC HD5450 512MB SDDR3 64BITS SAMSUNG DVI HDMI W/LP BRACKET ROHS	VGA CARD 5450 512MB SDDR3 SDI	VG.APC54.511
CABLES	DVI TO VGA DONGLE CONNECTOR	DVI TO VGA DONGLE	D0.VGA26.P01
	HDD SATA CABLE	C.A SATA HDD BOXERII	50.SC101.003
	LED SWITCH CABLE	C.A LED SWITCH BOXER X350	50.SE301.002
	ODD SATA CABLE	C.A SATA ODD BOXERII	50.SC101.002
	POWER CORD 250V 3PIN 1800MM UK	POWER CORD 1800MM 250V UK	27.03118.031

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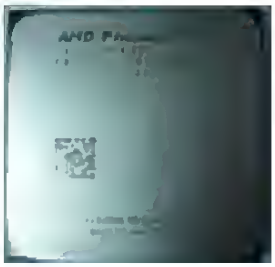
Category	Part Name	Description	Acer Part No.
CASE/COVER/BRACKET ASSEMBLY	FRONT IO BRACKET	BRKT F-IO BOXER X350	33.SE301.001
	ASSY MAIN-CHASSIS MCP61 BOXER X350	ASSY MAIN-CHASSIS MCP61 BOXER X350	60.SE901.001
	UPPER CASE	CAS UP BOXER X350	60.SE201.002
	LOWER CASE	ASSY LCASE-ASM MCP61 BOXER X350	60.SE901.002
	HDD&ODD COVER BRACKET	ASSY ODD-HDD-ASM BOXER X3	33.SC101.002
	FRONT BEZEL W/LED SWITCH CABLE	ASSY MAIN-BEZEL BOXER X350	60.SE201.004
CPU/PROCESSOR 	CPU AMD ATHLON II X2 240 2.8GHZ 2M L2 CACHE 65W REGOR	IC CPU ATHLON II X2 240 2.8GHZ	KC.AT202.240
	CPU AMD CPU ATHLON II X2 215 65W 2.7G ADX215OCK22GQ	IC CPU ATHLON II X2 215 65W 2	KC.AT202.215
	CPU AMD ATHLON II X2 245 2.9GHZ 2M L2 CACHE 65W REGOR	IC CPU ATHLON II X2 245 2.9GHZ	KC.AT202.245
	CPU AMD ATHLON II X2 250 3.0GHZ 2M L2 CACHE 65W REGOR ATHIIX2250	IC CPU ATHLON II X2 250 3.0GHZ	KC.AT202.250
	CPU AMD ATHLONII 255 AM3+ 2X1M 4000 940 65W C-2 3.1G DUAL CORE	IC CPU ATHLONII 255 AM3+ 2X1M	KC.AT202.255
	CPU AMD ATHLONII B22 AM3+ 2.8G 2X1M 4000 940 65W C-2 DUAL CORD	IC CPU ATHLONII B22 AM3+ 2.8G	KC.AT202.B22
	CPU AMD ATHLONII B24 AM3+ 3.0G 2X1M 4000 940 65W C-2 DUAL CORD	IC CPU ATHLONII B24 AM3+ 3.0G	KC.AT202.B24
	CPU AMD ATHLONII 235E AM3+ 2.7G 2X1M 4000 940 45W C-2 DUAL CORD	IC CPU ATHLONII 235E AM3+ 2.7G	KC.AE202.235
	CPU AMD ATHLONII 240E AM3+ 2.8G 2X1M 4000 940 45W C-2 DUAL CORE	IC CPU ATHLON II X2 240E 2.8G	KC.AE202.240
	CPU AMD ATHLON II X3 400E 2.2GHZ 1.5M L2 CACHE 45W RANA ATHIIX3400E	IC CPU ATHLON II X3 400E 2.2GH	KC.AE202.400
	CPU AMD ATHLON II X3 405E 2.3GHZ 1.5M L2 CACHE 45W RANA ATHIIX3405E	IC CPU ATHLON II X3 405E 2.3GH	KC.AE202.405
	CPU AMD ATHLONII 160U AM3+ 1.8G 1M 3600 940 20W C-2 SINGLE CORE	IC CPU ATHLONII 160U AM3+ 1.8G	KC.AU202.160
	CPU AMD ATHLONII 250U AM3+ 1.6G 2X1M 3200 940 25W C-2 DUAL CORE	IC CPU ATHLONII 250U AM3+ 1.6G	KC.AU202.250
	CPU AMD ATHLONII 260U AM3+ 1.8G 2X1M 3600 940 25W C-2 DUAL CORE	IC CPU ATHLONII 260U AM3+ 1.8G	KC.AU202.260

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Category	Part Name	Description	Acer Part No.
CPU/PROCESSOR	CPU AMD PHENOMII X 3 700E 2 4GHZ 7 5M TOTAL CACHE 65W HEKA PHNMII700E	IC CPU PHENOMII X 3 700E 2 4GH	KC PE202 700
	CPU AMD PHENOMII X 3 705E 2 5GHZ 7 5M TOTAL CACHE 65W HEKA PHNMII705E	IC CPU PHENOMII X 3 705E 2 5GH	KC PE202 705
	CPU AMD SEMPRON 140 2 7G 45W PGA	IC CPU SEMPRON 140 2 7G 45W PGA	KC SMP02 140
DVD-RW DRIVE	ODD PLDS SUPER-MULTI DRIVE HH 16X DH-16AASH BLACK BEZEL SATA FOR HF+WINDOWS7	ODD HH SM HF+W7 PLDS DH-16AASH	KU 0160F 009
	ODD HLDS SUPER-MULTI DRIVE HH 16X GH41N BLACK BEZEL SATA HF + WIN 7	ODD HH SM HF+W7 HLDS GH-41N	KU 0160D 049
	ODD HLDS DVD-ROM HH 16X TRAY DH20N LF BLACK BEZEL SATA HF+WIN 7	DVD ROM HH HF+W7 HLDS DH20N	KV 0160D 016
	ODD PLDS DVD-ROM HH DL 16X TRAY DH-16D5SH LF BLACK BEZEL SATA HF+WIN 7	DVD ROM HH HF+W7 DH-16D5SH	KV 0160F 002
HDD/HARD DISK DRIVE	HDD 320GB 3 5" 7200RPM SATA II SEAGATE PHARAOH 8MB NCQ	HDD 320G 3 5" SEAGATE PHARAOH	KH 32001 015
	HDD 320GB 3 5" 7200RPM SATA II 8MB HGST HDT721032SLA380 SATURN	HDD 320GB HGST HDT721032SLA380	KH 32007 006
	HDD 320GB 3 5" 7200RPM SATA II 16MB HGST HDS721032CLA362 JUPITER	HDD 320GB 3 5" HGST HDS721032CLA362 7 2K	KH 32007 011
	HDD 320GB 3 5" 7200RPM SATA II WD WD3200AAJS-22L7A0 XL320S	HDD 320GB WD WD3200AAJS-22L7A0	KH 32008 016
	HDD 3 5" 500GB 7200RPM SATA SEAGATE PHARAOH ST3500418AS	HDD 500GB SGT ST3500418AS 7 2K	KH 50001 012
	HDD 500GB 3 5" 7200RPM SATA II 16MB HGST HDS721050CLA362 JUPITER	HDD 500GB HGST HDS721050CLA362	KH 50007 012
	HDD 3 5" 500GB 7200RPM SATA WD XL320M WD5000AAKS-22M9A0	HDD 500GB WD5000AAKS-22V1A0	KH 50008 014
	HDD 640GB 3 5" 7200RPM HGST HDT721064SLA360 SATURN SATA	HDD 640GB HGST HDT721064SLA360	KH 64007 001
	HDD 640GB 3 5" 7200RPM SATA II 32MB HGST HDS721064CLA332 JUPITER	HDD 640GB HGST HDS721064CLA332	KH 64007 002
	HDD 640GB 3 5" 7200RPM SATA II WD WD6400AAKS-22A7B2 XL320-M	HDD 640GB WD WD6400AAKS-22A7B2	KH 64008 003
	HDD 3 5" 1000GB 7200RPM SATA SEAGATE SEAGATE ST31000528AS LF	HDD 1TB SGT ST31000528AS 7 2KR	KH 01K01 007

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Category	Part Name	Description	Acer Part No.
HDD/HARD DISK DRIVE	HDD 1TB 3.5" 5400RPM SATAII WD10EADS-22M4B0 8MB GP	HDD 1TB WD10EADS-22M2B0 GP	KH.01K08.005
	HDD 1TB 3.5" 7200RPM SATA HGST SATURN HDT721010SLA360	HDD 1TB HGST HDT721010SLA360	KH.01K07.002
	HDD 1TB 3.5" 7200RPM SATA II 32MB HGST HDS721010CLA332 JUPITER	HDD 1TB HGST HDS721010CLA332	KH.01K07.003
	HDD 1.5TB 3.5" 5400RPM SATA WD GP500 WD15EADS-22P8B0 32MB GP	HDD 1.5TB WD15EADS-22P8B0 GP	KH.15K08.001
	HDD 1.5TB 3.5" 7200RPM SATA SEAGATE BRINKS ST31500341AS 32MB CC4H 7	HDD 1.5TB SGT ST31500341AS 7.2	KH.15K01.002
HEATSINK	CPU HEATSINK AIR COOLER LGA775 72*72 65W AVC	COOLER LGA775 72*72 65W AVC	HI.10800.035
	CPU COOLER LGA775 45W 72*72 AVC	COOLER LGA775 72*72 45W AVC	HI.10800.024
	KEYBOARD PS/2 104 KEY CHICONY KB-07593US25522V BLACK US W/O EKEY	KB CHICONY KB-0759 PS/2 104K B	KB.PS203.284
KEYBOARD	KEYBOARD PS/2 104 KEY BLACK TRADITIONAL CHINESE W/O EKEY	KB CHICONY KB-0759 PS/2 104K B	KB.PS203.285
	KEYBOARD PS/2 104 KEY SIMPLIFIED CHINESE W/O EKEY	KB CHICONY KB-0759 PS/2 104K B	KB.PS203.286
	KEYBOARD PS/2 104 KEY CHICONY KB-07593U425522V BLACK US INTERNATIONAL W/O EKEY	KB CHICONY KB-0759 PS/2 104K B	KB.PS203.287
	KEYBOARD PS/2 104 KEY CHICONY KB-07593A025522V BLACK ARABIC ENGLISH W/O EKEY	KB CHICONY KB-0759 PS/2 104K B	KB.PS203.288
	KEYBOARD PS/2 104 KEY CHICONY KB-07593T025522V BLACK THAILAND W/O EKEY	KB CHICONY KB-0759 PS/2 104K B	KB.PS203.289
	KEYBOARD PS/2 105 KEY CHICONY CHICONY BLACK SPANISH W/O EKEY	KB CHICONY KB-0759 PS/2 105K B	KB.PS203.290
	KEYBOARD PS/2 105 KEY BLACK PORTUGUESE W/O EKEY	KB CHICONY KB-0759 PS/2 105K B	KB.PS203.291
	KEYBOARD PS/2 105 KEY CHICONY KB-07596CA25522V BLACK CANADIAN FRENCH	KB CHICONY KB-0759 PS/2 105K B	KB.PS203.292
	KEYBOARD PS/2 107 KEY BLACK BRAZILIAN PORTUGUESE	KB CHICONY KB-0759 PS/2 107K B	KB.PS203.293
	KEYBOARD PS/2 109 KEY BLACK JAPANESE W/O EKEY	KB CHICONY KB-0759 PS/2 109K B	KB.PS203.294
	KEYBOARD PS/2 105 KEY CHICONY KB-07596D125522V BLACK GERMAN W/O EKEY	KB CHICONY KB-0759 PS/2 105K B	KB.PS203.295

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Category	Part Name	Description	Acer Part No.
KEYBOARD	KEYBOARD PS/2 105 KEY CHICONY KB-07596I125522V BLACK ITALIAN W/O EKEY	KB CHICONY KB-0759 PS/2 105K B	KB.PS203.296
	KEYBOARD PS/2 105 KEY CHICONY KB-07596F125522V BLACK FRENCH W/O EKEY	KB CHICONY KB-0759 PS/2 105K B	KB.PS203.297
	KEYBOARD PS/2 105 KEY CHICONY KB-07596S025522V BLACK SWEDISH W/O EKEY	KB CHICONY KB-0759 PS/2 105K B	KB.PS203.298
	KEYBOARD PS/2 105 KEY CHICONY KB-07596GB25522V BLACK UK W/O EKEY	KB CHICONY KB-0759 PS/2 105K B	KB.PS203.299
	KEYBOARD PS/2 105 KEY BLACK DUTCH W/O EKEY	KB CHICONY KB-0759 PS/2 105K B	KB.PS203.300
	KEYBOARD PS/2 105 KEY CHICONY KB-07596CH25522V BLACK SWISS/G W/O EKEY	KB CHICONY KB-0759 PS/2 105K B	KB.PS203.301
	KEYBOARD PS/2 105 KEY BLACK BELGIUM W/O EKEY	KB CHICONY KB-0759 PS/2 105K B	KB.PS203.302
	KEYBOARD PS/2 105 KEY BLACK ICELANDIC W/O EKEY	KB CHICONY KB-0759 PS/2 105K B	KB.PS203.303
	KEYBOARD PS/2 105 KEY CHICONY KB-07596N025522V BLACK NORWEGIAN W/O EKEY	KB CHICONY KB-0759 PS/2 105K B	KB.PS203.304
	KEYBOARD PS/2 104 KEY BLACK US INTERNATIONAL W/ HEBREW W/O EKEY	KB CHICONY KB-0759 PS/2 104K B	KB.PS203.305
	KEYBOARD PS/2 105 KEY BLACK US INTERNATIONAL W/ HEBREW W/O EKEY	KB CHICONY KB-0759 PS/2 105K B	KB.PS203.306
	KEYBOARD PS/2 105 KEY BLACK SLOVENIAN W/O EKEY	KB CHICONY KB-0759 PS/2 105K B	KB.PS203.307
	KEYBOARD PS/2 105 KEY BLACK SLOVAK W/O EKEY	KB CHICONY KB-0759 PS/2 105K B	KB.PS203.308
	KEYBOARD PS/2 104 KEY CHICONY KB-07593S325522V BLACK RUSSIAN W/O EKEY	KB CHICONY KB-0759 PS/2 104K B	KB.PS203.309
	KEYBOARD PS/2 105 KEY BLACK HUNGARIAN W/O EKEY	KB CHICONY KB-0759 PS/2 105K B	KB.PS203.310
	KEYBOARD PS/2 104 KEY CHICONY KB-07593GR25522V BLACK GREEK W/O EKEY	KB CHICONY KB-0759 PS/2 104K B	KB.PS203.311
	KEYBOARD PS/2 105 KEY BLACK DANISH W/O EKEY	KB CHICONY KB-0759 PS/2 105K B	KB.PS203.312
	KEYBOARD PS/2 104 KEY BLACK CZECH W/O EKEY	KB CHICONY KB-0759 PS/2 104K B	KB.PS203.313
	KEYBOARD PS/2 105 KEY BLACK ROMANIAN W/O EKEY	KB CHICONY KB-0759 PS/2 105K B	KB.PS203.314
	KEYBOARD PS/2 105 KEY BLACK TURKISH W/O EKEY	KB CHICONY KB-0759 PS/2 105K B	KB.PS203.315
	KEYBOARD PS/2 105 KEY BLACK SPANISH LATIN W/O EKEY	KB CHICONY KB-0759 PS/2 105K B	KB.PS203.316

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Category	Part Name	Description	Acer Part No.
KEYBOARD	KEYBOARD PS/2 104 KEY BLACK KAZAKH W/O EKEY	KB CHICONY KB-0759 PS/2 104K B	KB.PS203.319
	KEYBOARD PS/2 104 KEY BLACK TURKMEN W/O EKEY	KB CHICONY KB-0759 PS/2 104K B	KB.PS203.320
	KEYBOARD PS/2 105 KEY CHICONY KB-07596DN25522V BLACK NORDIC W/O EKEY	KB CHICONY KB-0759 PS/2 105K B	KB.PS203.321
	KEYBOARD PS/2 104 KEY BLACK SIMPLIFIED CHINESE W/O EKEY	KB CHICONY KB-0759 PS/2 104K B	KB.PS203.322
	KEYBOARD PS/2 104 KEY BLACK US W/O EKEY	KB CHICONY KB-0759 PS/2 104K B	KB.PS203.323
	KEYBOARD PS/2 105KEY CHICONY KB-07596CU25522V BLACK ENGLISH/CABADIAN FRENCH	KB CHICONY KB-0759 PS/2 105K B	KB.PS203.328
	KEYBOARD PS2 104 KEY LITEON SG-30610-XUW BLACK US W/O EKEY	KEYBOARD PS2 SK-9620 SG-30600	KB.PS20B.069
	KEYBOARD PS2 104 KEY LITEON SG-30610-XLW BLACK TRADITIONAL CHINESE W/O EKEY	KB PS2 SK-9620 SG-30600-XMW TC	KB.PS20B.070
	KEYBOARD PS/2 104 KEY BLACK CHINESE W/O EKEY	KB PS2 SK-9620 SG-30600-XLW CN	KB.PS20B.071
	KEYBOARD PS/2 104 KEY BLACK US INTERNATIONAL W/O EKEY	KEYBOARD PS2 SK-9620 SG-30601	KB.PS20B.072
	KEYBOARD PS/2 104 KEY BLACK ARABIC ENGLISH W/O EKEY	KB SK-9620 104K AE NO EURO#NIW	KB.PS20B.073
	KEYBOARD PS2 104 KEY LITEON SG-30610-33W BLACK THAILAND W/O EKEY	KEYBOARD PS2 SK-9620 SG-30600	KB.PS20B.074
	KEYBOARD PS2 105 KEY LITEON SG-30610-2EW BLACK SPANISH W/O EKEY	KEYBOARD PS2 SK9620 SG-30610	KB.PS20B.075
	KEYBOARD PS/2 105 KEY BLACK PORTUGESE W/O EKEY	KEYBOARD PS2 SK-9620 SG-30600	KB.PS20B.076
	KEYBOARD PS2 105 KEY LITEON SG-30610-23W BLACK CANADIAN FRENCH W/O EKEY	KEYBOARD PS2 SK-9620 SG-30600	KB.PS20B.077
	KEYBOARD PS/2 107 KEY BLACK BRAZILIAN PORTUGUESE W/O EKEY	KB SK-9620 107K PT/BR NO EURO#	KB.PS20B.078
	KEYBOARD PS/2 109 KEY BLACK JAPANESE W/O EKEY	KEYBOARD PS2 SK-9620 SG-30600	KB.PS20B.079
	KEYBOARD PS2 105 KEY LITEON SG-30610-2DW BLACK GERMAN W/O EKEY	KEYBOARD PS2 SK-9620 SG-30600	KB.PS20B.080
	KEYBOARD PS2 105 KEY LITEON SG-30610-2IW BLACK ITALIAN W/O EKEY	KEYBOARD PS2 SK-9620 SG-30600	KB.PS20B.081

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Category	Part Name	Description	Acer Part No.
KEYBOARD	KEYBOARD PS2 105 KEY LITEON SG-30610-2FW BLACK FRENCH W/O EKEY	KEYBOARD PS2 SK-9620 SG-30600	KB.PS20B.082
	KEYBOARD PS/2 105 KEY BLACK SWEDEN W/O EKEY	KEYBOARD PS2 SK-9620 SG-30600	KB.PS20B.083
	KEYBOARD PS2 105 KEY LITEON SG-30610-2BW BLACK UK W/O EKEY	KEYBOARD PS2 SK-9620 SG-30600	KB.PS20B.084
	KEYBOARD PS/2 105 KEY BLACK DUTCH W/O EKEY	KEYBOARD PS2 SK-9620 SG-30600	KB.PS20B.085
	KEYBOARD PS/2 105 KEY BLACK SWISS/G W/O EKEY	KB SK-9620 105K CHEURO#NIW/	KB.PS20B.086
	KEYBOARD PS/2 105 KEY BLACK BELGIUM W/O EKEY	KEYBOARD PS2 SK-9620 SG-30600	KB.PS20B.087
	KEYBOARD PS/2 109 KEY BLACK JAPANESE W/O EKEY	KEYBOARD PS2 SK-9620 SG-30600	KB.PS20B.088
	KEYBOARD PS/2 105 KEY BLACK NORWEGIAN W/O EKEY	KEYBOARD PS2 SK-9620 SG-30600	KB.PS20B.089
	KEYBOARD PS/2 104 KEY BLACK US INTERNATIONAL W/ HEBREW W/O EKEY	KEYBOARD PS2 SK-9620 SG-30600	KB.PS20B.090
	KEYBOARD PS/2 105 KEY BLACK POLISH W/O EKEY	KB SK-9620 105K PLNO EURO#N	KB.PS20B.091
	KEYBOARD PS/2 105 KEY BLACK SLOVENIAN W/O EKEY	KEYBOARD PS2 SK-9620 SG-30600	KB.PS20B.092
	KEYBOARD PS/2 104 KEY BLACK SLOVENIAN W/O EKEY	KB SK-9620 104K SLO EURO#NIW/O	KB.PS20B.093
	KEYBOARD PS2 104 KEY LITEON SG-30610-XAW BLACK RUSSIAN W/O EKEY	KEYBOARD PS2 SK-9620 SG-30600	KB.PS20B.094
	KEYBOARD PS/2 105 KEY BLACK HUNGARIA W/O EKEY	KEYBOARD PS2 SK-9620 SG-30600	KB.PS20B.095
	KEYBOARD PS/2 104 KEY BLACK GREEK W/O EKEY	KEYBOARD PS2 SK-9620 SG-30600	KB.PS20B.096
	KEYBOARD PS/2 105 KEY BLACK DENMARK W/O EKEY	KEYBOARD PS2 SK-9620 SG-30600	KB.PS20B.097
	KEYBOARD PS/2 104 KEY BLACK CZECH W/O EKEY	KEYBOARD PS2 SK-9620 SG-30600	KB.PS20B.098
	KEYBOARD PS/2 105 KEY BLACK ROMANIAN W/O EKEY	KEYBOARD PS2 SK-9620 SG-30600	KB.PS20B.099
	KEYBOARD PS/2 105 KEY BLACK TURKISH W/O EKEY	KEYBOARD PS2 SK-9620 SG-30600	KB.PS20B.100
	KEYBOARD PS2 105 KEY LITEON SG-30610-29W BLACK SPANISH LATIN W/O EKEY	KB SK-9620 105K LAT EURO#NIW/O	KB.PS20B.101
	KEYBOARD PS/2 105 KEY BLACK TURKISH-Q W/O EKEY	KB SK-9620 105K TR-Q EURO#NIW/	KB.PS20B.102
	KEYBOARD PS/2 105 KEY BLACK ARABIC FRENCH W/O EKEY	KEYBOARD PS2 SK-9620 SG-30600	KB.PS20B.103
	KEYBOARD PS/2 105 KEY BLACK KAZAKH W/O EKEY	KB SK-9620 105K KA NO EURO#NIW	KB.PS20B.104

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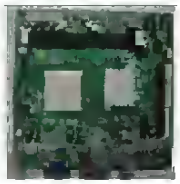
Category	Part Name	Description	Acer Part No.
KEYBOARD	KEYBOARD PS/2 104 KEY BLACK TURKMEN W/O EKEY	KB SK-9620 104K TMNO EURO#NIW/	KB.PS20B.105
	KEYBOARD PS2 105 KEY LITEON SG-30610-79W BLACK NORDIC W/O EKEY	KB SK-9620 105K NR EURO#NIW/O	KB.PS20B.106
	KEYBOARD PS/2 105KEY LITEON SG-30610-93W BLACK ENGLISH/CANADIAN FRENCH	KB PS2 SK-9620 SG-30610-93W EN	KB.PS20B.109
MAINBOARD 	MAIN BOARD DA061L/ AMANALO WNMCP61PGBEM W/RTC BATTERY W/O CPU&MEMORY	MB WNMCP61PGBEM DA061L/AMANALO	MB.NBT01.003
MEMORY	MEMORY UNIFOSA DDR3 1333MHZ 1G UNB-DIMM GU502203EP0201 LF 128*8 0.065UM	DIMM 1G GU502203EP0201 UNB	KN.1GB0H.015
	MEMORY SAMSUNG DDR3 1333MHZ 1G UNB-UFFERED DIMM W/O ECC F DIE (46NM)	DIMM 1G M378B2873FHS-CH9	KN.1GB0B.036
	MEMORY A-DATA DDR3 1333MHZ 1G UNB-DIMM W/O ECC W/ELPIDA CHIP	DIMM 1G AD63I1A0816EZ DDR3 UNB	KN.1GB0C.008
	MEMORY TRANSCEND DDR3 1333MHZ 1G UNB-DIMM W/O ECC W/PSC CHIP	DIMM 1G JM1333KLU-1G DDR3 1333MHZ UNB	KN.1GB0F.005
	MEMORY UNIFOSA DDR3 1333MHZ 2G UNB-DIMM GU512303EP0202 LF 128*8 0.065UM	DIMM 2G GU512303EP0202 UNB	KN.2GB0H.009
	MEMORY SAMSUNG DDR3 1333MHZ 2G UNB-UFFERED DIMM W/O ECC F DIE (46NM)	DIMM 2G M378B5673FH0-CH9	KN.2GB0B.024
	MEMORY A-DATA DDR3 1333MHZ 2G UNB-DIMM W/O ECC W/ELPIDA CHIP	DIMM 2G AD63I1B1617EZ DDR3 UNB	KN.2GB0C.005
	MEMORY TRANSCEND DDR3 1333MHZ 2G UNB -DIMM W/O ECC W/PSC CHIP	DIMM 2G JM1333KLU-2G DDR3 1333MHZ UNB	KN.2GB0F.004
	MEMORY KINGSTON DDR3 1333MHZ 2G UNB ACR256X64D3U1333C9	DIMM 2G ACR256X64D3U1333C9	KN.2GB07.002
	MEMORY NANYA DDR3 1333MHZ 2G NT2GC64B8HA0NF-CG	DIMM 2G NT2GC64B8HA0NF-CG	KN.2GB03.016

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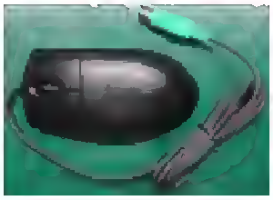
Category	Part Name	Description	Acer Part No.
POINTING DEVICE 	LOGITECH 0810_PS2 OPTICAL MOUSE PS2 M-SBR-ACR2	MOUSE PS2 OPT 910-000849 LOGI	MS.11200.013
	MOUSE PS2 OPT SM-9620 LITEON SM-30600-00W	MOUSE PS2 OPT SM-9620 LITEON	MS.11200.017
POWER SUPPLY	POWER SUPPLY 220W NPFC 115V/230V LITEON PS-5221-06A1-ROHS EUP	SPS 220W NPFC EUP 115V/230V LI	PY.2200B.006
	POWER SUPPLY 220W EUP 115VAC/230V NPFC DELTA DPS-220UB A EUP	SPS 220W EUP 115VAC/ 230V NPFC	PY.22009.006
	POWER SUPPLY 220W PFC 230V DELTA DPS-220UB-1 A EUP	SPS 220W EUP PFC 230V DPS-220	PY.22009.007
	POWER SUPPLY 220W FULL EPS5.0 DELTA DPS-220UB-2 B EUP	SPS 220W EUP FULL EPS5.0 DPS-2	PY.22009.008
	POWER SUPPLY 220W PFC 230V LITEON PE-5221-08AP-ROHS EUP	SPS 220W PFC EUP 230V LITEON P	PY.2200B.007
	POWER SUPPLY 220W LITE-ON FULL PS-5221-9AE-ROHS 8 5L EUP 82+	SPS 220W FULL PS-5221-9AE-ROHS	PY.2200B.008
	POWER SUPPLY 220W CHICONYPOWER REGULAR CPB09-D220R AAGASSI	SPS 220W REGULAR CPB09-D220R AAGA	PY.2200F.004
	POWER SUPPLY 220W CHICONYPOWER PFC CPB09-D220A AAGASSI	SPS 220W PFC CPB09-D220A AAGASSI	PY.2200F.005
	POWER SUPPLY 220W CHICONYPOWER EPA CPB09-D220E AAGASSI	SPS 220W EPA CPB09-D220E (FR 220W, ES) A	PY.2200F.006
SCREWS	SCREW I NO6-32 L5 BZN	SCRW I NO6-32 L5 BZN	86.00J07.B60
	SCREW PAN #6-32 L6 NI BOXER WZS	SCRW PAN #6-32 L6 NI BOXER WZS	86.00J44.C60
	SCREW #6-32 L5 PAN NI	SCRW #6-32 L5 PAN NI	86.00J90.B60
	SCREW NO4-40 L6.5 PAN NI	SCRW NO4-40 L6.5 PAN NI	86.00N03.B40
	SCRW PAN M3 L5 BZN	SCRW PAN M3 L5 BZN	86.1A324.5R0
	SCREW FLAT #6-32*3/16 NI	SCREW FLAT #6-32*3/16 NI	86.5A5B6.012
SPEAKER	SPEAKER CHIAMAW 9M-20A200-000 ACER LOGO LF 0810	SPEAKER ACER LOGO/ LF0810	SP.10600.011

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Appendix A

Technical Specifications

This appendix list the technical specifications of the Aspire AX1400 hardware components

Processor

Common features:

- Socket: Socket AM3/AM2+, 941 pin contacts
- Package type: 45 nm

Item	Specification			
Series	AMD Athlon™ II X3	AMD Athlon™ II X2	AMD Athlon™ II X3	AMD Phenom™ II X3
Model	405e and 400e	255, 250, 245, 240	240e and 235e	705e and 700e
No. of cores	3	2	2	3
Base frequency	2.30 GHz	3.1, 3.0, 2.9, 2.8 GHz	2.8, 2.7 GHz	2.5, 2.4 GHz
L2 cache	1.5 MB	2.0 MB	2.0 MB	1.5 MB
DDR3 speed support	Yes	Yes	Yes	Yes
Thermal design power	45 W	65 W	65 W	65 W

Item	Specification		
Series	AMD Sempron	AMD Athlon™ II X2	AMD Athlon™ II X2
Model	140	260u, 250u, 160u, 150u	B24 and B22
No. of cores	1	2	
Base frequency	2.70 GHz	1.8, 1.6 GHz	
L2 cache	1.0 MB	2.0 MB	
DDR3 speed support	Yes	Yes	
Thermal design power	45 W	25W	

Chipsets

Item	Specification
Chipset	▪ NVIDIA® nForce® 430 MCP (MCP61), or ▪ NVIDIA® nForce® 730a/720a MCP (MCP78)

BIOS

Item	Specification
BIOS chip	AMI BIOS
Setup utility	CMOS Setup Utility

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Memory

Item	Specification
Controller	Integrated in the NVIDIA® nForce® Chipset
Number of DIMM slot	2
Maximum memory	4 GB (using two 2 GB modules)
Data rate	800/1066/1333 MT/s
Supported capacities	1-, or 2 GB
DIMM type	240-pin DDR3 SO-DIMM
Supported brands	A-Data, Kingston, Nanya, Samsung, Transcend, Unifosa
Population rule	You can install memory modules in any combination as long as they match the above specifications.

Hard Disk Drive

Item	Specification
Controller	Integrated in the NVIDIA® nForce® Chipset
Number of HDD bays	1
Form factor	3.5-inch 25.4 mm
Interface	SATA 3.0
Supported capacities	
320 GB	• HGST Saturn – HDT721032SLA380 • HGST Jupiter – HDS721032CLA362 • Seagate Pharoah – ST3320418AS • WD – WD3200AAJS-22L7A0
500 GB	• Seagate Pharoah – ST3500418AS • Toshiba MK5065GSX • WD – WD5000AAKS-22V1A0
640 GB	• HGST Saturn – HDT721064SLA360 • HGST Jupiter – HDS721064CLA332 • WD – WD6400AAKS-22A7B2
1000 GB	• HGST Saturn – HDT721010SLA360 • HGST Jupiter – HDS721010CLA332 • Seagate Pharoah – ST31000528AS • WD – WD10EADS-22M2B0
1500 GB	• Seagate Brinks – ST31500341AS • WD – WD15EADS-22P8B0

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Optical Disc Drive

Item	Specification
Controller	Integrated in the NVIDIA® nForce® Chipset
Type	Supports DVD-R/RW drive or DVD-Super Multi double-layer drive
Form factor	5 25-inch standard
Interface	SATA
Write/read speed	16x
Supported models	• HLDS DH20N • PLDS DH-16D5SH

Card Reader (optional)

Item	Specification
Controller	9-in-1
Card compatibility	• Memory Stick (MS) - supports up to 32 GB • Memory Stick Micro (M2) - supports up to 32 GB • xD-Picture Card (xD) - supports up to 2 GB • Secure Digital (SD) - supports up to 2 TB • MultiMedia Card (MMC) - supports up to 32 GB • CompactFlash, Type I/II (CF, Type I and II) - supports up to 2 TB • Memory Stick PRO (MS PRO) - supports up to 32 GB

Gigabit Ethernet

Item	Specification
Controller	• Realtek RTL8201EL (Single-Chip/Port 10/100 Fast Ethernet PHYceiver with Auto MDIX)
LAN protocol	10/100/1000 Mbit
LAN connector type	RJ-45

Audio

Item	Specification
Controller	• Realtek ALC888S 7 1+2 Channel High Definition Audio Codec, or • Realtek ALC662 5 1 Channel High Definition Audio Codec
Audio jacks	• Front panel Headphone and microphone jacks • Rear panel Microphone, line-out, and line-in jacks

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Power Supply Unit

Item	Specification
Vendor and Model	• Delta - DPS-220UB A (non-PFC) • Delta - DPS-220UB-1 A (PFC) • Delta - DPS-220UB-2 B (FR) • Lite-On - PS-5221-06A1-RoHS (non-PFC) • Lite-On - PE-5221-08AP-RoHS (PFC) • Lite-On - PS-5221-9AE-RoHS (FR) • CP - CPB09-D220R (non-PFC) • CP - CPB09-D220A (PFC) • CP - CPB09-D220E (FR)
Input	100-127V ~/6A - 220V-240V ~/3.15A 50-60 Hz
Output (max.)	220 W
Connectors	• 1 x 20/24-pin ATX connector • 1 x 4-pin ATX connector • 2 x SATA connectors

Power Management

Devices	S1	S3	S4	S5
Power Button	V	V	V	V
USB Keyboard/Mouse	V	V	N/A	N/A
PME	Disabled	Disabled	Disabled	Disabled
RCT	Disabled	Disabled	Disabled	Disabled
WOR	Disabled	Disabled	Disabled	Disabled

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